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DECEMBER 1947

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FOR THE EXPERIMENTER & RADIO ENTHUSIAST

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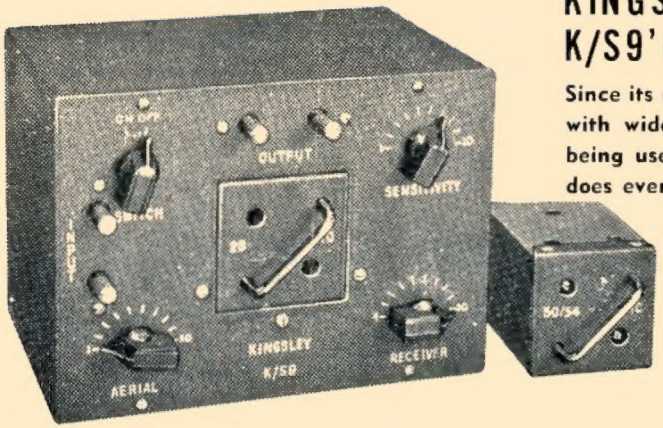

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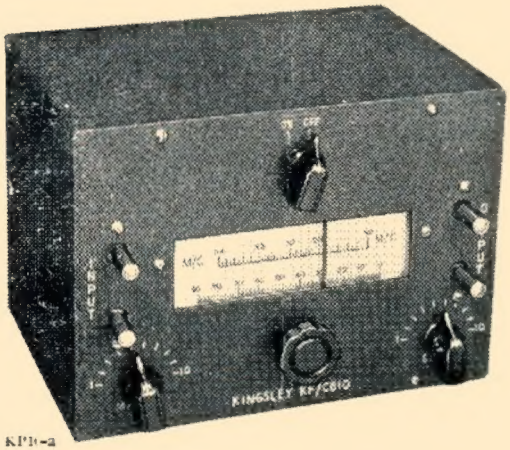

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— IN THIS ISSUE —

EDITORIAL

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With the approach of the Christmas Season and the close of another year, every Amateur should pause to reflect, and recapitulate the events of the last twelve months before turning to the new horizons of the future.

We have seen many changes in Regulations, which have benefitted the Amateur generally. The power limit has been increased to 100 watts, the waiving of several restrictive regulations such as the length of QSOs and the abolition of the probationary period on c.w. and for a finale, the recognition of the Amateur in International circles as a member of the Amateur Service, this latter a definite step forward in the status of the Amateur.

While we have not fared so well in some of the frequency allocations at Atlantic City, we have gained new bands to offset the losses sustained. We must bear in mind, in this matter of frequency allocations, the increasing need for Radio Navigational Aids which have gained at the expense of Amateurs and other fixed, mobile and Governmental Services. The Broadcast Services have also made gains in frequency allocations, the full implications of which we are not yet able to determine, but is a subject which we will save for a more opportune time.

We have seen very rapid advances in techniques in the past year, and at this present time, have achieved through VK5KL the world's DX record for 50 Mc. With the availability of much surplus equipment from the various Services, an opportunity has come for many Amateurs to produce really efficient gear suitable for exploring the new bands and techniques made available to us.

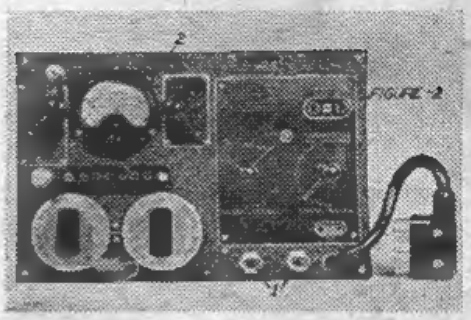
Turning now to the future, we foresee a bright New Year for Amateur Radio in general, and the Wireless Institute in particular. We must work together in harmony, united in strength and with the knowledge that by so doing we can and will make the cause of the Amateur more widely respected and appreciated. In this way, we will make our presence felt Internationally with a larger voice at the next International Conference. NOW is the time to work towards that end.

To round off the year in the true spirit, the Federal Executive wish each and every Amateur A MERRY CHRISTMAS AND A HAPPY NEW YEAR.

W.T.S.M.

Modification of Type 3, Mark II Equipment

Collated by the Technical Advisory Committee (Vic. Division)



In response to numerous requests for publication in "Amateur Radio" of information regarding the use of Service type equipment for Amateur purposes, the T.A.C. conducted an extensive search for knowledge, and the ideas submitted hereunder are the results thereof. If the matter presented and the method of presentation meets with the approval of our readers, the T.A.C. will apply its energies to other Service equipment in a like manner.

INSTALLATION OF 807 IN PLACE OF 6L6

By J. E. ROGERS[2], VK3TO

The writer had been playing with the idea of replacing the 6L6 valve in the above transmitter with an 807 for some time, but the general opinion of those with whom the matter was discussed was that it would not fit in the case.

A.W.V. Company tables were consulted and it was found that the maximum length of type 807 including pins is 5¾". We therefore have ⅜" to spare in the case which is 6⅛" high inside.

It is necessary to carefully space the socket from the chassis so that approximately 3/16" clearance is available at each end of the valve. The present hole in the chassis is just large enough to allow this to be done.

At this stage it should be noted that use of the right type of socket is essential; see Fig. 1 (1). The contacts grip the pins from the side and extend radially with the result that the length of the tube is not increased by the socket. The type of socket required was used in some Service equipment and odd samples have been seen on Disposals counters.

The following changes in placement of components and in wiring were found desirable:—

(a) The plate r.f. choke was moved up higher to shorten the plate lead.

(b) The screen supply was disconnected and the screen supplied from the high voltage through a 30,000 ohm 2 watt resistor in order to allow plate and screen modulation.

(c) The grid leak was changed from 20,000 ohms to 10,000 ohms to comply with the Valve Company's recommendations.

(d) A cylindrical metal shield was installed to screen the lower part of the tube; Fig. 1 (2).

(e) A parasitic suppressor (40 ohms) was placed right at the plate clip of the 807. (This may or may not be necessary.) Fig. 1 (3).

(f) The neutralising condenser was removed and replaced by a home-made item consisting of a 1" length of coaxial cable from which the centre wire was removed.

The outer screen is soldered to the grid side of the neutralising circuit and a ¼" machine screw, to which the plate lead is attached, is screwed in the hole in the centre of the insulation. Adjustment is made by turning the screw in or out of the hole as required. **Note.—Use an insulated screwdriver.** It will be found that this small capacity is sufficient for complete neutralisation.

The question will be asked "Why neutralise an 807?" The writer has always found 807s more easily tamed if neutralised and in the case of the Type 3 Mark II the circuit is already there, so why not?

When the above modification is completed two milliamps grid current can be obtained on 14 Mc. using a good 3.5 Mc. crystal.

It is not claimed that the modification produces revolutionary increases in output or efficiency, but 807 valves can be more easily and cheapily replaced than can type 6L6, added to which the owner feels happier modulating 30 watts input to a valve with plenty of reserve.

WARNING.—Do not be tempted to load up the transmitter to high output just because 807 valves are cheap and can take it. Follow the instructions issued with the set and be safe. Replacement selenium rectifiers are hard to get and cost half as much as you paid for the complete outfit.

Additional modifications will be noticed in the illustration which, while they are not brought about by installation of the 807, may be of interest to some readers, i.e. two toggle switches will be seen on the front panel; Fig. 2 (1). They are used to short the key jacks for telephony and to short the modulation transformer for telegraphy. The modulator plugs in to the pin jacks near the meter; Fig. 2 (2).

The two 12 mfd. electrolytic condensers in the rear view between the meter and the variable condensers are in series across the high voltage to provide additional smoothing for telephony. They are each shunted by a 100,000 ohm resistor to ensure even distribution of the voltage across each; Fig. 1 (4).

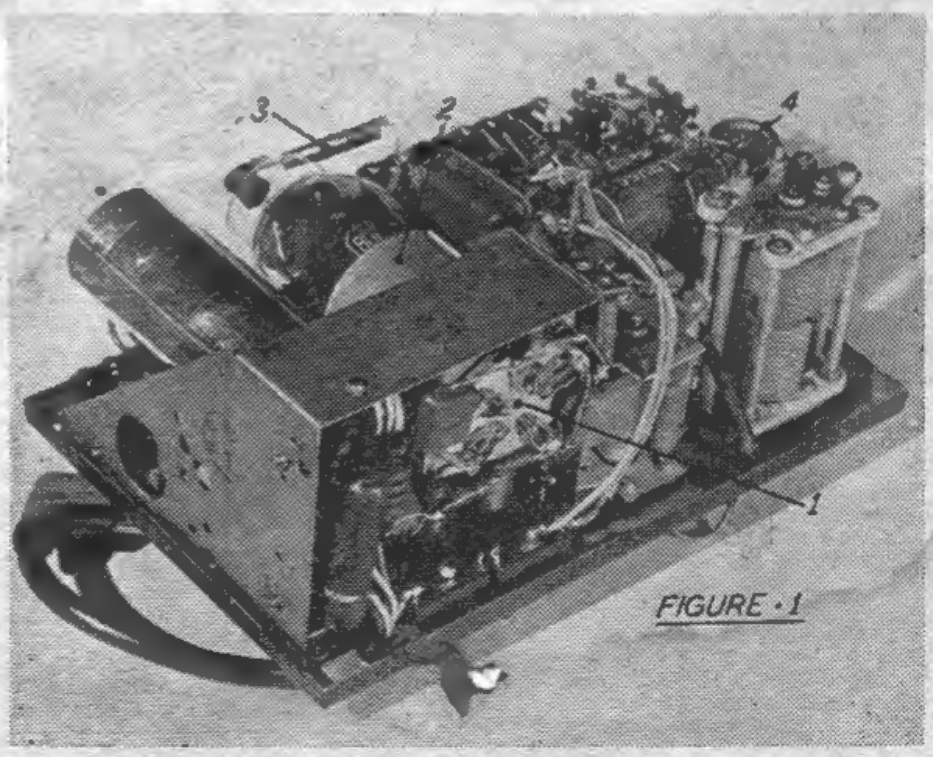


FIGURE 1

[2] 3 Moorhouse St., Camberwell, Vic.

additional capacitor connected between moving arm and point from whence C6c was removed. In other words, the d.c. grid connections of output valve are undisturbed. Thus we have an audio gain control in addition to normally provided i.f./mixer control.

HOW TO USE A LOUD SPEAKER

By HERB STEVENS*, VK3JO

The receiver as it stands is quite capable of operating a small "permag" speaker without additional amplification. The eastiest way to use a speaker is to employ 600 ohm transformer to couple the voice coil to phone jacks of receiver; however where matching transformer is not available the following modifications will enable use of speaker with normal 10,000 to 15,000 ohm primary.

Drill hole beneath existing "phone" pin jacks and insert insulated jack therein. Connect 0.1 mfd. capacitor between this jack and the anode of output valve. Now, by inserting one lead from speaker into this jack and the other into earthed phone jack, "Bob's your uncle."

The spacing of jack should be so arranged that distance does not coincide with distance separating existing pin jacks in order to preclude possibility of mis-connecting phones.

MODIFYING THE CARRYING CASES

By R. JEPSON, VK3JI

By judiciously applying hammer and chisel, external fittings may be removed. Now by fitting case handles to the top and rubber buffers to the base, we have a pair of units which can be mounted close together, or carried with ease. The writer discovered that the application of rubber feet relieved the tension on the aural organs occasioned by XYL's strenuous objections to having polished furniture carved by the rough surface of the units.

REMOTE CONTROL

By CHAS QUINN*, VK3WQ

The writer uses the Type 3 Transmitter in conjunction with external modulator unit and separate receiver. In order to effect switching from operating position the following modifications were adopted.

(1) Installation of telephone type key switch having four sets of change over contacts which operate as follows:—

Central position of key switch:—(OFF) all circuits open.

Down position of key switch:—(C.W.) First set of contacts apply 250 v. to transmitter for c.o. (existing "250 volt in" lead connected to lead going to key switch, other switch lead being

(Continued on Page 28)

* 33 Auburn Grove, Hawthorn East, E.3.

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Part Two—FREQUENCY MODULATION—PRINCIPLES AND EQUIPMENT FUNDAMENTALS

By A. H. KAYE*, B.Sc. (Melb.), A.M.I.E. (Aust.)

In concluding this article, the basis of which formed a lecture delivered to the Victorian Division, I now propose to deal briefly with equipment used, in particular to features which are peculiar to frequency modulation.

MEANS OF FREQUENCY MODULATING THE CARRIER

The frequency generated by most valve oscillators is determined mainly by the inductance and capacity in the tuning arrangement, and the most obvious method of accomplishing frequency modulation is to cause the modulating frequencies to vary a reactance, i.e. either an inductance or capacity in the tuned circuit. Figure 9 shows in principle such an arrangement, and consists of an oscillating circuit with a condenser microphone in parallel with the capacity of the tuned circuit. Variations in the capacity of the condenser microphone will thereby vary the frequency of the oscillations generated, giving a frequency modulated output.

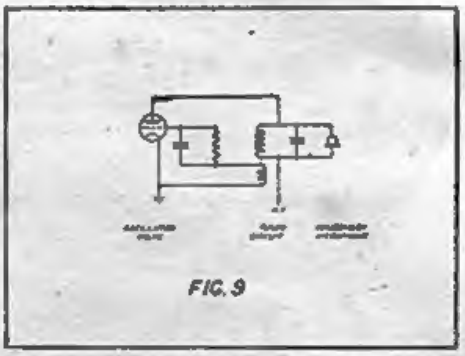


FIG. 9

The above arrangement is only crude, and in general a reactance valve is used across the tuned circuit rather than a microphone direct. The output circuit of this reactance valve is shunted across the tuned circuit of the oscillator, and its control grid excited by a voltage derived from the oscillator circuit but 90° out of phase with it. This grid voltage acts in the reactance tube plate circuit to draw an alternating current 90° out of phase with the oscillator tuned circuit voltage, and the tube thus acts as a shunting reactance. The reactance tube control grid is also driven by the modulating voltage, which can be regarded as a varying bias and therefore the plate current varies in accordance with modulation, and likewise the shunting effect and the oscillator frequency. This arrangement is indicated in Figure 10.

It will be noted that this system is inherently unstable, and it is necessary in practice to introduce automatic frequency control, so that any carrier frequency drift is corrected by reference to a crystal oscillator.

Another system of modulation which has the advantage that the carrier is directly crystal controlled involves phase modulation. As mentioned earlier, frequency modulation is the same as phase modulation in which the amplitude of the modulating frequencies is inversely proportional to those modulating frequencies. In this system a predistorting

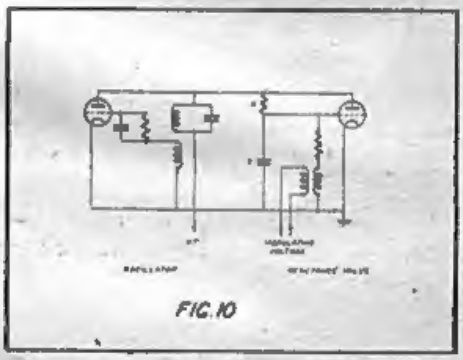


FIG. 10

network is used to give this inverse characteristic to the modulating frequencies, which then phase modulate a crystal controlled carrier.

Operation of this type of modulator is difficult to understand without mathematical analysis. Briefly, if we take the **side band products only** of an amplitude modulated carrier and add to these the **carrier with a phase shift of 90°**, then the resultant is a phase modulated carrier; amplitude modulation is also present and can be removed by a limiter. Figure 11 shows in simplified form this method—the output from the balanced modulator furnishes the side bands only, and these are added to the carrier with the necessary 90° phase shift.

I have mentioned only briefly these methods of modulation, and there are

* Divisional Engineer (Radio Station Construction), P.M.G's. Department, Central Administration.

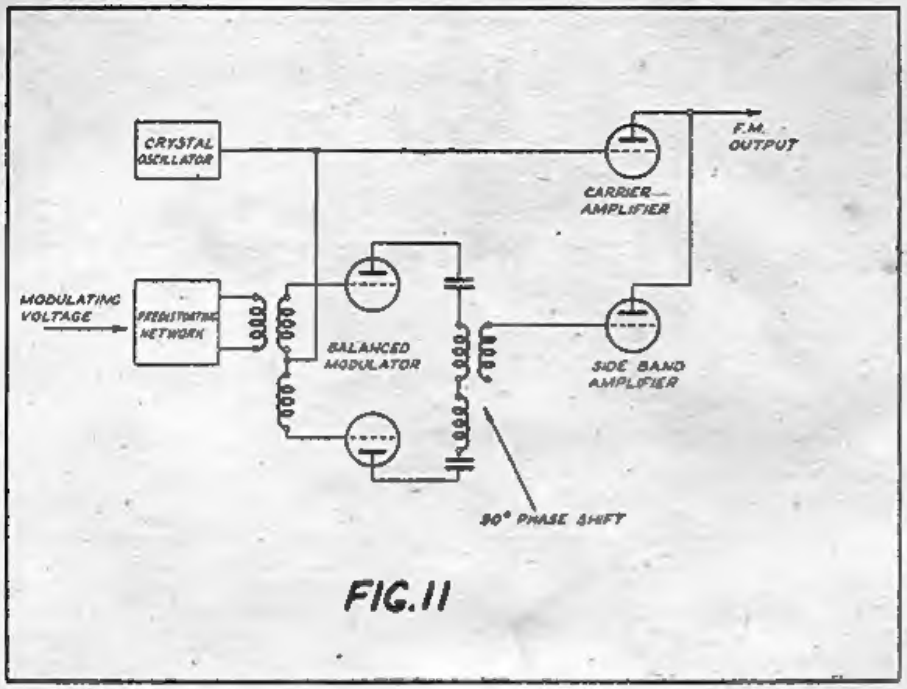


FIG. 11

many other methods and modifications, some involving optical systems and mechanical systems; a method of particular interest involves a new tube known as a phasitron, in which modulation is applied to an electron beam within the tube.

FREQUENCY MULTIPLICATION

Frequencies at which f.m. services operate involve the use of frequency multiplication of the crystal frequency, and this is done by use of valve multiplifiers. If an f.m. carrier is passed through such a multiplying chain, the carrier frequency **and** the deviation are multiplied accordingly, and the total band width occupied is increased.

Another method of increasing frequency (or similarly decreasing frequency if required) is by heterodyning the carrier with an oscillator of another frequency, and in this case the carrier changes to the difference between the original frequency and the heterodyning frequency; the frequency deviation and the band width are **unchanged.**

Both these systems of frequency changing are used, and the combination of the two in a single transmission system enables a suitable choice to be made of crystal frequency and initial frequency deviation, while giving the desired final carrier frequency and deviation. This is an important factor in respect to the phase shift modulation system, as it is necessary to keep the maximum phase deviation to a low value to ensure low distortion.

DEMODULATION

At the other end of the transmission system there must be a means of demodulating the frequency modulated carrier, and this is done in two parts, the first part of the equipment being the discriminator and the second a detector, which is in general similar to the detector used in the amplitude modulation system. Basically, all that is required of the discriminator is that the **amplitude** of its output should vary according to the **frequency** of its input, and this can be achieved using a simple tuned circuit, the resonant frequency of which is slightly higher or lower than the frequency corresponding to maximum frequency deviation of the incoming carrier; frequency excursions up and down one side of the resonance curve with modulation give corresponding amplitude variations in the voltage across the tuned circuit. The input-output characteristic of such an arrangement is not linear so this simple tuned circuit is not used in practice.

Figure 12 shows a simple practical discriminator known as the double tuned circuit or push-pull discriminator. This arrangement in the figure includes the rectifying or detecting elements and has one circuit which is resonant above the carrier frequency and the other just below. Each such tuned circuit works into a diode rectifier and the outputs are connected in opposition so that at carrier frequency the two outputs cancel out, whereas for other frequencies the output of one or other of the diodes predominates giving amplitude variations in the combin-

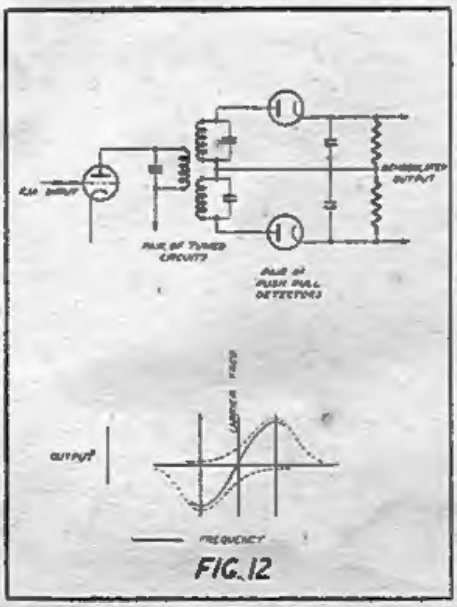


FIG. 12

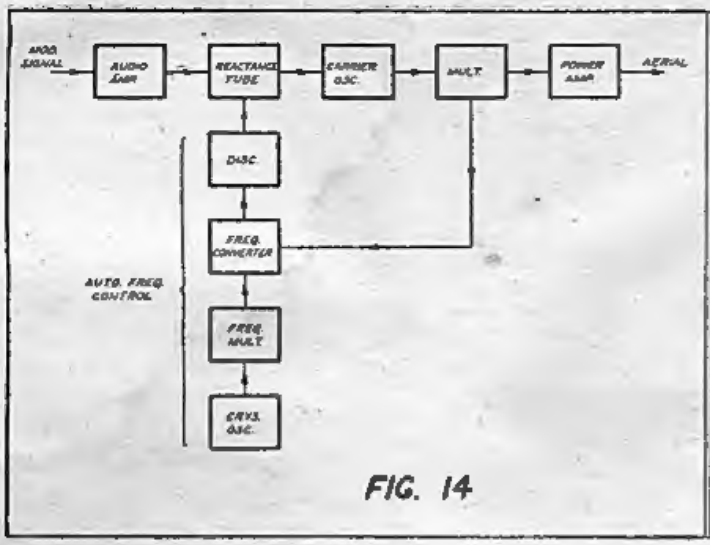
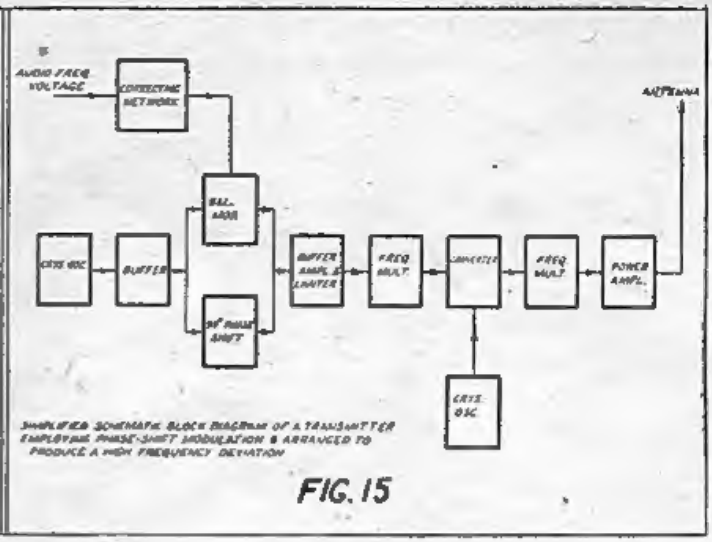


FIG. 14



SIMPLIFIED SCHEMATIC BLOCK DIAGRAM OF A TRANSMITTER EMPLOYING PHASE-SHIFT MODULATION & ARRANGED TO PRODUCE A HIGH FREQUENCY DEVIATION

FIG. 15

ing circuit directly proportional to frequency variations in the input.

There are many variations and modifications of the discriminator circuit, one simple though rather crude method being to detune an ordinary a.m. receiver, so that the side of the selectivity curve is set to the frequency of the incoming carrier; frequency excursions thus move up and down the selectivity curve giving corresponding amplitude variations in the output.

LIMITER

Limiters are used in many other arrangements, but owing to the importance of this unit in the frequency modulation transmission system a few brief comments are justified. There are two main reasons for the use of this item, firstly to eliminate amplitude modulation noise, which was discussed above, and secondly to ensure that no amplitude modulation reaches the discriminator, which gives a distorted output under such conditions.

There are many types of limiter in use, but the essential feature is that a comparatively small signal causes overloading or saturation and prevents further increase in the amplitude of the output.

The limiter is preferably used immediately prior to the discriminator in order to minimise risk of distortion due to amplitude modulation, which could be caused by restriction of the band width. Therefore, the output of the limiter must be high enough to operate the discriminator and the gain of earlier stages must be great enough to saturate the limiting stage. It is perhaps relevant to comment here that the wide band required for f.m. (or at least in most f.m. applications) means a relatively low gain per stage.

It is also perhaps relevant to point out that because the limiter is used automatic volume control is not necessary to maintain a constant audio output from the receiver; it is frequently desirable, however, to incorporate a.v.c. in the receiver to prevent overloading of the first detector, which would result in the production of spurious frequencies and give distorion and/or interference.

PRE-EMPHASIS AND DE-EMPHASIS

It was pointed out above in connection with the f.m. noise triangle that there is a progressive increase in the amplitude at which noise is reproduced as we proceed from low to high audio frequencies. The depth of modulation is also normally low at the higher frequencies, which are required for high fidelity broadcasting.

Pre-emphasis is the system of increasing the level of the higher audio frequencies to give a depth of modulation approaching 100%, i.e. approaching maximum deviation, but it is necessary to avoid going right to 100% as this may result in overmodulation under some conditions. De-emphasis in the receiver is to restore the relative levels of the low and high audio frequencies, and the de-emphasis circuit **must be complementary** to the pre-emphasis circuit in the transmitter. For this reason it is essential in the case of broadcasting that a standard system of pre-emphasis and de-emphasis be used for all transmitters and receivers respectively. The pre-emphasis and de-emphasis circuits can be regarded as complementary equalisers; the pre-emphasis circuit in the transmitter raises the level of the higher audio frequencies relative to the lower audio frequencies, while the de-emphasis circuit attenuates high frequency components with the result that the programme material is returned to its original form, and the interference due to high frequency noise is substantially reduced.

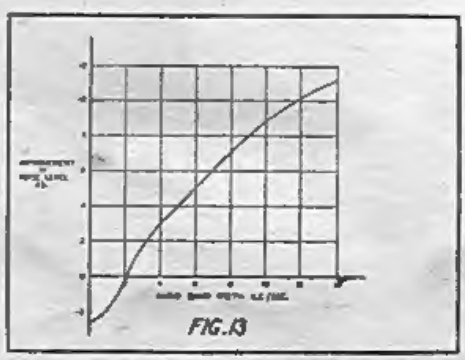


FIG. 13

It should be noted that this arrangement could be applied to amplitude modulation, since the higher audio frequencies are usually at relatively low levels, but since the noise amplitude out of the receiver is in general constant and does not follow the triangle law of f.m., the improvement in this case is less.

In Figure 13 I have shown the gain in respect to noise level when the Pre-emphasis and De-emphasis system is applied to f.m. with various audio band widths. The circuits used in this case are the American Radio Manufacturers Association tentative standards. It might be noted that there is some loss due to the **necessity for reducing the general depth of modulation** so that overmodulation on peaks may be avoided; this is particularly important when instruments such as the guitar or piano are being broadcast. When the audio band width is less than about 3 Kc., there is very little gain from the system, while in narrow band systems there will actually be a loss.

To summarise the various items of equipment just discussed, I have shown in Figures 14 and 15 block schematics of complete transmitters, Figure 14 being typical of the arrangement in the transmitter using the reactance tube modulator, and Figure 15 being typical of the arrangement in a transmitter using the phase modulator. Particular attention is directed to the means of securing frequency stability in each of the two cases.

SUMMARY OF RESULTS AT ATLANTIC CITY

The following is a copy of a special issue of the I.A.R.U. Calendar reporting the actions of the International Radio Conference at Atlantic City, just concluded, insofar as they affect Amateur Radio.

I am obliged to say that Amateur Radio throughout the world will suffer some losses in frequency allocations as a result of this conference. I am happy to say, on the other hand, that we have some new frequency bands. These matters will be detailed hereinafter.

Previous Calendars have reported to you the advance planning of I.A.R.U. for this conference, the initial amateur proposals of various countries, and related matters. Actually, previous Calendars constitute a part of the overall story, as do also my "Atlantic City Reports," which have been appearing in QST throughout the summer months. In the present Calendar I shall limit myself principally to a summary of results.

NEW DEFINITIONS

First, you will be interested in some general matters. Article 1 of the Radio Regulations contains the following definitions:—

Amateur Service.—A service of self-training, intercommunication and technical investigations carried on by amateurs, that is, by duly authorised persons interested in radio techniques solely with a personal aim and without pecuniary interest.

Amateur Station.—A station in the amateur service.

We believe these new definitions represent a positive step forward. For the first time we are definitely recognised as one of the world's radio services. Previously amateurs have been established as a separate class solely on the basis of our personal and non-pecuniary interest. The new definition retains this fundamental aspect but is expanded to show that amateurs engage in **self-training** and **technical investigations**, advancing us well beyond the "hobby" or pastime stage, and establishing our activities as a constructive, contributing service.

Article 42 of the Radio Regulations is entitled "Amateur Stations." It reads as follows:—

§1. Radio communications between amateur stations of different countries shall be forbidden if the administration of one of the countries concerned has notified that it objects to such radio communications.

§2. (1) When transmissions between amateur stations of different countries are permitted they must be made in plain language and must be limited to messages of a technical nature relating to tests and to remarks of a personal character for which, by reason of their unimportance, recourse to the public telecommunications service is not justified. It is absolutely forbidden for amateur stations to be used for transmitting international communications on behalf of third parties.

(2) The preceding provisions may be modified by special arrangements between the countries concerned.

§3. (1) Any person operating the apparatus in an amateur station must have proved that he is able to transmit, and to receive by ear, texts in Morse Code signals. Administrations concerned may, however, waive this requirement in the case of stations making use exclusively of frequencies above 1,000 (one thousand) Mc.

(2) Administrations shall take such measures as they judge necessary to verify the qualifications, from a technical point of view, of any person operating the apparatus of an amateur station.

§4. The maximum power of amateur stations shall be fixed by the administrations concerned, having regard to the technical qualifications of the operators and to the conditions under which these stations must work.

§5. (1) All the general rules of the Convention and of the present Regulations shall apply to amateur stations. In particular, the transmitting frequency must be as constant and as free from harmonics as the state of technical development for stations of this nature permits.

(2) During the course of their transmissions amateur stations must transmit their call sign at short intervals.

For the first time, the line of distinction between amateur stations and private experimental stations is now complete. While the two services were originally covered by the same regulations, in Madrid (1932) the definitions applying to amateurs were first set up separately from the experimental services, and now this article pertaining to general regulations is devoted exclusively to us. With one exception its provisions are of identical effect to those of Cairo. The exception is that the requirement of code ability as a prerequisite to operating authorisation may be waived, at the discretion of individual administrations, in case of amateur stations making use **exclusively** of frequencies above 1,000 Mc.

FREQUENCY ALLOCATION

We come now to the matter of frequency allocations. As always, this was the major conference subject. It is impossible to describe herein the many developments which produced the final table. I can only refer you again to the QST series of "Atlantic City Reports."

It was possible to solve some of the frequency allocation problems resulting from divergent viewpoints of the interested nations by resorting to regional allocations, principally in those portions of the spectrum between approximately 5 and 27 Mc. where radio signals have, for the most part, small international effect. The world was divided into three regions. Regions 1 consists principally of Europe and Africa, plus all the remaining territory of the U.S.S.R. in Asia, and plus Outer Mongolia. Region 2 consists of the Americas, including the Caribbean area and Greenland, plus the Hawaiian Islands. Region 3 is the rest of the world, consisting mainly of Asia (minus U.S.S.R. and Outer Mongolia), Australia, New Zealand, and Oceania generally.

To give you a clearer understanding as you read the material to follow, I list below, by regions, the location of countries represented in I.A.R.U.:—

Region 1. — Austria, Belgium, Czechoslovakia, Denmark, Finland, France, Great Britain, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, South Africa, Sweden and Switzerland.

Region 2.—Argentina, Brazil, Canada, Chile, Colombia, Cuba, Mexico, Newfoundland, Paraguay, United States, Uruguay and Venezuela.

Region 3.—Australia, China, Netherlands Indies and New Zealand.

AS TO 1.715 Mc.

In Region 1 (Europe-Africa) the amateur service has been deleted from the allocation table as one of the users of this band. However, a footnote provides that Austria, Ireland, Netherlands, Northern and Southern Rhodesia, Switzerland, South Africa and the U.K. may assign to the amateur service up to 200 Kc. of the band 1715-2000 Kc., with a mean power limit of ten watts and on condition of no harmful interference to other services.

In Region 2 and 3 the allocation of 1800-2000 Kc. is to (a) amateur, (b) fixed, (c) mobile, except aeronautical mobile, and (d) radio navigation. A footnote establishes a priority for two loran channels 1800-1900 and 1900-2000 Kc., but provides that any of the other services (a, b, c above) may employ whichever of these two channels is not required for loran, on condition of no harmful interference to loran. However, in the northern part of Region 2 this provision offers no tangible frequencies for amateurs at present, inasmuch as in this area both channels are currently used for the loran navigational service. It should be here recorded that this entire matter will probably be reviewed and possibly revised at a special conference on loran some time in 1949.

AS TO 3.5 Mc.

In Region 1 there is a reduction of 100 Kc. in the frequencies available in our 80-metre band. The band 3500-3800 Kc. is allocated to (a) amateur, (b) fixed, (c) mobile, ex-

cept aeronautical mobile. Aeronautical mobile gains the 3800-3900 Kc. band (shared with fixed and land mobile) as well as 3900-3950 Kc. Although the band 3500-3800 Kc. may be assigned exclusively to amateurs, it is our understanding that in most cases amateurs will operate in those 300 Kc. on a mixed-shared basis with the other two services.

In Region 2 the allocation is almost precisely the same as at Cairo, the Atlantic City table showing 3500-4000 Kc. assigned to (a) amateur, (b) fixed, and (c) mobile, except aeronautical mobile. The maintenance of this band as exclusively amateur will be a subject for the Inter-American Radio Conference scheduled for Bogota, Colombia, in October of 1948.

In Region 3 the allocation is identical to Cairo except that the band is reduced to 3500-3900 Kc. In this area there is the possibility of regional or sub-regional agreements on this band.

AS TO 7 Mc.

As expected from the initial proposals of many countries, principally European, discussion of the frequencies in our 40-metre band resulted in a protracted battle between broadcasting and amateurs. The final allocation was made on a regional basis and is not encouraging, not only because amateurs in countries outside the Americas will suffer the loss of a large part of this band, but also because amateurs in the American region will undoubtedly experience a great deal of interference from the operation of broadcast stations.

In Region 1 7000-7100 Kc. is assigned exclusively to amateurs. The band 7100-7150 is shared between amateurs and broadcasting, use by the amateur service being authorised on condition of no harmful interference to broadcasting. Broadcasting obtains exclusive rights to the remainder of the band, 7150-7300 Kc. In the Union of South Africa and the territory under mandate of South-West Africa, however, 7100-7150 Kc. will be used exclusively for the amateur service.

In Region 2 the entire band 7000-7300 is allocated exclusively to the amateur service.

In **Region 3** the allocation is identical to that in Europe-Africa: 7000-7100 exclusively amateur, 7100-7150 shared between amateurs and broadcasting; 7150-7300 exclusively broadcasting. China and New Zealand, however, have indicated a desire to assign 7100-7300 Kc. to the amateur service. The conference has insisted, nevertheless, that these countries, as well as Australia and Netherlands East Indies insofar as amateur operation in 7100-7150 Kc. is concerned, **must "take all practicable steps to avoid causing any harmful interference to the broadcasting service and ensure that amateur stations do not use a peak power exceeding 100 watts. If, however, harmful interference to the broadcasting service is experienced, these administrations will consider reducing the use of these bands by the amateur service."**

AS TO 14 Mc.

The Atlantic City conference has reduced our 20-metre band by 50 Kc. The allocation table provides an exclusively amateur band 14000-14350 Kc. The remainder will go to the fixed service on the effective date of the new regulations. In addition, U.S.S.R. will use 14250-14350 Kc. for the fixed service **within** its own boundaries, and has pledged itself to use technical means to hold possible interference to amateurs to a minimum.

AS TO 21 Mc.

I am pleased to report that amateurs will have a new, exclusive, world-wide band 21000-21450 Kc.

AS TO 27 Mc.

A new frequency (27,120 Kc.) was set up at Atlantic City for "industrial, scientific and medical purposes," such emissions to be confined within ±0.6% of that frequency. **In a 270 Kc.** portion of this "I.S.M." band (26960-27230 Kc.), authorisation for amateur shared use will be issued by the countries of Region 2 and by **Australia,** New Zealand, Union of South Africa, and the territory under mandate of South-West Africa.

AS TO 28 Mc.

Our 10-metre band will become 28000-29700 Kc., one of the factors in the reduction of the band limits being the establishment of the 27 Mc. band detailed above. However, our

28 Mc. band will be exclusively an amateur assignment throughout the world, the Cairo allocation to "experimental" stations now being deleted.

AS TO 50 Mc.

In Region 1, I am obliged to report there is no general amateur allocation between 29.7 and 144 Mc. However, South Africa, South-West Africa and the Rhodesias will assign 50-54 Mc. exclusively to the amateur service. In France and U.S.S.R., 72-72.8 Mc. will be assigned to amateurs.

Except as noted above for certain African areas, Region 1 has adopted 41-68 Mc. for broadcasting, with the intention of using it only for television. It is much larger than television will need for years to come. Each country retaining freedom to assign any frequency for any purpose on the condition of avoiding harmful interference to other countries, there is good likelihood that European member-societies can arrange with their administrations for an amateur assignment somewhere in the 50-60 Mc. region for the indefinite future.

In Regions 2 and 3, the band 50-54 Mc. is allocated exclusively to amateurs.

AS TO HIGHER BANDS

144-148 Mc.—World wide.

146-148 Mc.—Additional assignment in Regions 2 and 3.

220-225 Mc.—Exclusive assignment in Region 2. Available also in China, South and South-West Africa and the Rhodesias.

420-450 Mc.—World wide except U.S.S.R., shared aeronautical navigational aids, the latter having priority.

450-460 Mc.—Additional assignment in Region 1 (except U.S.S.R.) and Region 3, again with priority for the navigation aids with which the band is shared.

1215-1300 Mc.—World wide except U.S.S.R.

2300-2450 Mc.—World wide, but subject to possible interference from industrial, scientific and medical service use of the band-edge frequency 2450 Mc

3300-3500 Mc.—Exclusive assignment in Region 2. In Region 3, amateur, fixed, mobile and radio navigation share 3300-3900 Mc.

5650-5850 Mc.—World wide, subject to possible interference from operation of the industrial, scientific and medical service on 5850 Mc.

5850-5925 Mc.—Additional assignment in Region 2.

10000-10500 Mc.—World wide.

EFFECTIVE DATE

This is the picture we shall enter when the radio regulations of the conference become effective. Every country participating in the conference signed the regulations, and no reservations or exceptions which affect amateurs were entered. The date for those provisions affecting frequencies above 27.5 Mc. has been set as **1st January, 1949.** Because of the lengthy work involved in producing a new International Frequency List to replace the "Bern List," the effective date of regulations affecting frequencies **below 27.5 Mc.** will be somewhat later, tentatively set as **1st September, 1949, but subject to postponement. As concerns our international bands, therefore, we shall continue to operate under the Cairo provisions for about two more years, perhaps longer.**

CONCLUSIONS

At the beginning of the conference it was apparent from the proposals of many nations that amateur radio would suffer some losses or shifts in present frequencies, and make some gains. Yet it is not now easy to judge accurately how amateur radio throughout the world will fare under the new Atlantic City regulations. The widely-differing philosophies of the various governments of the world toward amateur radio and its relative importance necessitated regional arrangements in numerous of our bands and (especially in the case of 7 Mc.) the usefulness of these frequencies in some regions will depend to a large extent on their invasion by non-amateur services in other regions Another "question mark" is the 21 Mc. band—how useful it will be, how far it will go toward compensating amateurs for the comparatively small loss at 14 Mc. and the severe cut (outside the American Region) at 7 Mc. It is our belief that 21 Mc. will be an interesting and useful band for international communication throughout much of the 11-year sunspot cycle, perhaps carrying a majority of amateur DX work. But we shall just have to wait and see.

And thus I end this brief summary of Atlantic City Conference results. I should like to add a word of gratitude, on behalf of President Bailey and myself, for the splendid cooperation and hard work of the member society delegates listed in the June Calendar as comprising the I.A.R.U. delegation.

The next world conference to revise the radio regulations is scheduled to be held in Buenos Aires, Argentina, some time in 1952. Although five years away, it is even now not too early to begin thinking about our preparations for that meeting.

The stronghold of amateur radio is in the Americas and the British Dominions. But amateur radio is and should always remain world wide, and we must never allow it to become an institution limited to a few countries. While the national amateur societies band together as the International Amateur Radio Union, it is not the Union which has responsibility for the attitudes of the various governments toward amateur radio—that responsibility lies solely with the individual member-society and its leaders. Those government attitudes are determined over a period of years, and not just a month or so in advance of a world conference.

We shall, therefore, all have to be actively thinking and planning during these next five years how the institution of amateur radio can be made stronger in our respective countries, how it can better serve the peoples of our countries and of the world, and thereby gain in respect and prestige as not only an important but also an indispensable service. As officers of the national amateur societies, we must all be alert to opportunities whereby amateur radio can be of new and improved service to our countries, and whereby it can gain increased respect and recognition from the administrations. We should soon begin to plan, too, the mechanism for our representation at the next world conference, a subject on which Headquarters will present some thoughts in coming issues of the Calendar

K. B. Warner, Secretary.

SUCH NICE PEOPLE

By "GREMLIN"

My apologies blokes for the way I've been poking my thoughts at you the last couple of months and neglecting the meat. That's what happens when the receiver gets a 180 (how's that for "Blue Orchid" lingo?) and you get to thinking. The old receiver is ticking again, complete with new devices. Well, nearly complete, just the c.r.o. to get in and then beware of the sartorial perfection of your emission. You fone blokes will be able to blab to your hearts content and I'll only have to see through your QSOs. How the XYL will beam, no more interruptions to her favorite b/c serial.

3LD was trying hard with 39 c.w. CQs straight. Not good enough I'm afraid, for phone merchant 2SH produced 76 spoken ones before giving his call three times. My congrats, for that's really some spruiking, even taking into consideration my ball and chain's Ow.- No wonder you changed to c.w. later on in the night. Yes, and before I forget, your c.w. is the clicky type. Gee, some guys can be unlucky.

I'll give 3XF the best clicks for the month with 3IG, 2PA and 3YD helping. 4RJ adds chirps for good measure while 3YD likes to throw in an extra dot with his v's and 3's. Better give 3PS a mention for chirps.

3AHM and 3ANL add weight to remarks in September "A.R." by friends Harrison and Buck, with punk keying, 3AHM clips the dash to no mean order, while 3ANL just breaks down. Cober Coulter, I'm all your way although I must admit I'm not too sure about honourable seafaring gent being able to send a drop. Which reminds me, must send a drop past the old pearly whites before proceeding. Ah, that's better, being phone type find great inducement to enable recommence proceeding—meaning start again (working so many South Americans gets me all screwballed).

Well, Sinister gentleladdie, sorry, nautical Minister, having waved flags for Horatio—which is ancient practice for sending a nautical drop—I'm prompted to inquire of 2ANN if he is same laddie who sported the call of 3MV before immigration. If so, your writings surprise me for an old timer, which maybe proves the old adage that when in Rome the cakes burn or something. (Now that should start something.) Incidentally, 3ANL can produce 23 faultless phone CQs before his call. That's what I say, see!

At this stage honourable Editor, may I have furtive dig at "A.R.?" This mathematical trickery, so called calculus, is too highbrow, for simple bod like "Gremlin." My arithmetical grey matter loses emission after solving 2 to 1, 5 to 4 on and other such vulgar fractions. On behalf of yours truly and other gentleblokes with mis-spent youth, more practical articles PLEASE.

Splashing provided by 4KO, 2GU, 3UP, 3VM, 2DI, 6RU, and 4HG with a solid hum. Some hum on 4PD's transmission but believe you have been off colour Tom so don't worry until you are fit again. Speedy recovery o.m.

3FU, your phone is badly distorted when tuned to centre of the carrier Improves on the sidebands if that's any help. That power control of yours has some effect on the quality, so maybe the correct drive to the final produces best results.

Thinking what a really punk note commercial had hopped into the 14 Mc. band when it turned out to be 3FS. I guess this is about the worst rock crusher to date. 3FP your phone is splashing on the high side. Shame on you after my bouquets on 813 use.

Now I'm an "Amateur Station Licencee" what can I do I couldn't as an "Experimental Station Licencee?' Please help me out just in case I'm missing something.

4UX complains he lives in a noisy area and is afraid he might get the blame. All I can say o.m., you are lucky to have gone so long. Everything from the failure of the gas supply to the cat drinking the neighbor's milk has been blamed on my poor inoffensive rig.

3ES, your carrier is a bit rough. An e.c.o. Roy? Heard 3SZ nattering away on the low end of 14 Mc. during the c.w. DX contest. I admire your courage o.m. Distorted phone from 3DS.

Heard this one night, "3AJE the most powerful station in St. Kilda by the sea" To me there is only two possibilities. Either Jack is only Ham bloke in this St. Kilda hamlet or the only one there to use his hundred watts allowance. Both a bit unlikely methinks!

No need for you chaps who write me to send stamped envelopes for replies. Thanks all the same.

Cheers and here's wishing you a blonde fairy for Xmas. P.S. Seems to be a lota VK3 types in this, so here goes—(Snooper "Gremlin" of E layer, F layer, Flemington, Randwick and other layer places).

FEDERAL NOTES

W.I.A. NATIONAL FIELD DAY 1948

General Rules

1. The Wireless Institute of Australia's National Field Day Contest will be held over the week-end of 24th and 25th January, 1948, and will commence at 1500 hours E.A.S.T. Saturday 24th and continue through until 2359 hours E.A.S.T. Sunday 25th

2. The Contest is limited to portable stations operating within the Commonwealth and its Mandated Territories.

3. A portable station, for the purposes of the Field Day, is defined as one whose power is not obtained from either private or public mains, shall be located not closer than 5 miles to the home location of the operators, and shall not be situated in any occupied dwelling.

4. No apparatus is to be set up or erected on the site of the portable station earlier than 6 hours prior to the commencement of the Contest. A station may be moved from one site to another within the same State during the period of the Contest.

5. More than one operator may be used in operating the portable station, providing that all operators are licenced amateurs.

6. Operation may be on any of the recognised amateur bands, and more than one transmitter may be used, provided that only one transmitter is used at any one time.

7. When calling, portable stations are to use the letters "W.I.A. N.F.D." frequently to indicate that they are portable stations. Attention is directed to the requirements for portable stations by Regulations 27 and 28 of the P.M.G's. Handbook, January, 1946.

Sections

8 The Contest is divided into three sections, namely, Open, C.W. and Phone sections. The Open Section shall consist of both Phone and C.W. operation. Participants may enter for all sections, provided a separate log is submitted in each case

Logs

9. Logs must reach the Federal Executive not later than the 15th February, 1948, and the decisions of the Federal Executive in all matters relating to the Field Day will be final

10. The operator/s will choose the best consecutive 24 hours of operation from the total operating time of 33 hours, and submit this 24 hour period as their log for the Field Day. Any lesser period than 24 hours may be operated.

11. Logs must show the location of the portable, name and call signs of the operators in the party, a description of the transmitter/s, receiver/s, antenna/e, and the power supplies used for the transmitter and receiver. The power input to the final stage with the antenna connected (which must not exceed 50 watts), will also be shown in the log.

12. Log entries are to show (in the following order), the Date, Time, Station worked, Amateur Band used, Report sent, Report received, Con-

tact Points claimed and Bonus Points claimed. A summary at the conclusion of the log will facilitate checking.

13. The completed log will be signed by the operators, with a statement that the Rules of the Contest have been adhered to.

Scoring

14. For the purposes of the Field Day, the following will constitute separate districts:—New South Wales (VK2), Victoria (VK3), Queensland (VK4), South Australia (VK5), Western Australia (VK6), Tasmania (VK7), Northern Territory (VK5) and Mandated Territories (VK9)

15. Contacts within a district cannot count as a score, and a complete exchange of reports (RST) is necessary before any points are claimed.

16. Points will be awarded as follows:—

	Points
(a) For contacts with a fixed station within the Commonwealth, outside the competitor's State	1
(b) For contacts with stations in Asia, North America, and Oceania (outside Australia)	3
(c) For contacts with stations in Europe	5
(d) For contacts with stations in Africa and South America	7
(e) For contacts with other portable stations in the Contest in districts (as Rule 14)	10
(f) For every two-way contact using frequency modulation, add to the above contacts	3
(g) A Bonus for each Continent worked on each band (see official I.A.R.U. map for the boundaries) added to the final score	25
(h) A Special Bonus for each Interstate or Overseas Contact on, or above, the 50 Mc. band, added to final score	50

Awards

17. A Special Certificate will be awarded to the outright winner in each, the Open, Phone, and C.W. sections.

18. A suitable Certificate will be awarded to the Sectional Winners in each district for which the outright winners, as above in Rule 17, are not eligible

APPLICATION FOR DX CC

The first application for the DX CC has been checked and found correct. It is R. Tandy, VK3KX, who has 106 countries in the Open Section.

ADDITIONS TO OFFICIAL LIST OF COUNTRIES

Please take note that the Isle of Man is now an official Country (prefix GD) and the prefix for the Marshall Island is now KX6.

ANTARCTIC EXPENDITION

In the middle of November the first party of the Australian National Antarctic Research Expedition left Melbourne by LST 3501 for Heard Island (position 53°S 073°E) where a Meteorological and Radio Station will be established.

Four Radio Operators sailed with the party and will remain there for a matter of twelve months. The names and calls are:—

Len Macey, VK3OY (Sydney).
Alan Campbell-Drury, VK3ACD (Melbourne).
George Compton, VK3AMG (Kalgoorlie), crystal frequency of 7090 Kc.
Arthur Scholes (no call sign), of Sydney.

Station (commercial) equipment consists of AT20s, AR7s and an AT5/AR8. 3OY has a ten watts Type 3 Mk. 2, while 3AMG and 3ACD have 5 watts Type A Mk. 3 transmitter-receivers. With suitable aerials they hope to be able to contact any interested VKs.

It is not expected that much will be heard of these stations before the end of January. At the present time it will not be possible to arrange skeds as the immediate work of making camp will consume all time and energy. When work settles down some arrangement will be made probably through Federal Headquarters to publicise the hours and frequencies. As it stands the frequencies should be 3.5, 7 and 14 Mc.

In January another party will leave for Macquarie Island with operators Jeff Mottershead, Peter King and Gersh Major (VK7AE).

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Advice has been received of a new award made available by the R.S G.B. for two-way contacts with 50 or more Empire countries. Some of the conditions are a trifle vague and action has been taken to have the position clarified Full particulars of the award will be published in this column, when the position is fully estabished.

Stations receiving cards which are not intended for them, are requested to return them to their state Bureau as soon as possible. Due to bad writing by the originator many cards are received with calls which are difficult to decipher and of course with the large volume of QSL traffic being handled, a few missorts are inevitable. Stations can help by returning them promptly.

For the benefit of new licencees the addresses of the State Bureaux are again published:—

N.S.W.—VK2YC, Mr. J. B. Corbin, 78 Maloney St., Eastlakes, N.S.W.
Vic.—VK3ZB, Mr. G. Roper, 26 Lucas St., Caulfield, S.E.8, Vic.
Qld.—VK4EN, Mr. E. Neale, 38 Felix St., Wooloowin, N.3, Brisbane, Qld.
S.A.—VK5RX, Mr. G. Luxon, 8 Brook St., West Mitcham, S.A.
W.A.—VK6RU, Mr. J. E. Rumble, Box F319, Perth, W.A.
Tas.—VK7AL, Mr. T. Allen, 6 Thirza St., Newtown, Tas.
Papua—VK9GW, Mr. G. A. Warner, care O.T.C., Port Moresby, Papua.

Envelopes for incoming cards should be sent regularly to the QSL Manager for your district.

Applications for awards should be sent with the cards either through your Divisional Secretary or direct to the Federal QSL Manager, VK3RJ, Ray Jones, Box 2611W, Melbourne An envelope should be enclosed for the return of cards.

In **Victoria**, outward cards together with remittance to cover the QSL charge of one half-penny per card, should be sent to VK3OF, Frank O'Dwyer, 190 Thomas St., Hampton, S.7, Vic.

Would some Spanish student please give me a translation of the following:—"Por una falta nuestra, cometida al enviarle anteriormente una correspondencia adjuntandole QSLs, falta del franqueo correspondiente. Es porque que le estamos adjuntando un Cupon Internacional a fin de hacerle effectiva lacantidad por uds. Aportada a aicha correspondencia. Esperando nos perdone el error cometido. Nos reiteramos do Ud. Atto. y S.S." Thanks in anticipation of a prompt translation so that a reply may be sent if necessary.

The QSL Manager for the Netherlands makes the following request. Would QSL Managers and others mailing cards to the Holland bureau —V.E.R.O.N., Box 400 Rotterdam, Holland, please put different value of stamps on the letters or packages, to further the collection of the Manager.

Advice is to hand from Austria that the O.V.S.V.—the pre-war Ham society for Austria—has been reformed and has official blessing. It now has 415 members. Willy Blaschek (ex-OE3WB), the QSL Manager pre-war, is again acting in the same capacity in addition to the secretaryship of the reformed body. Transmitting licences have not yet been re-issued but it is hoped to obtain them shortly. The society sends its greetings to Australian Amateurs and hopes soon for the restoration of pre-war conditions. The address of the society is O.V.S.V., Kierlingerstrasse 10, Klosterneuburg, Austria.

Bernie Swedloff (W3EKK) who operated recently in Japan and the Pacific Islands with the suffix /J9 and /VK9 requests that all cards should be forwarded to him via the A.R.R.L.

"Lindy," of W8BHW ex-W2BHW, well known to old timers and to all participants in contests for many years, has recently taken unto himself a wife. After dodging cupids darts for a few decades, he finally fell a victim. "Lindy" seems to be bringing up his new acquisition along right lines, for during contests she sits up with him and stimulates him with coffee, etc., at the right moments.

A scream from W6EYB, Lew Brown, states that he has been unable to wring a card out of 25 VKs whom he lists. The only VK card he had received to the time of writing (Sept., 1947) was from VK4PX for whom he is saving a bottle of Scotch. Doesn't state whether the Scotch is a threat or a promise.

The Ham population of the Telegraph Branch, Melbourne, is steadily becoming denser. Les Jackson 3XM, Herman Asmus 3ET, Val Barnes 3OT, Roy Perry 3OU, Garney Hancock 3RY, and the writer all help to advertise our dot dash and teletype "factory" in one way and another.

This column must have some psychic effect on certain Hams. No sooner had the par relative to non-receipt by VK7JH of a card from PK6HA reached print, than the card in question duly reached Jack Hooker. Jack manfully retracts his allegations against Lt. Hagers (PK6HA) and apologises for same. So now Jack is happy and so is PK6HA. And so are we all—I hope.

When the results of the recent contest are announced by the new contest manager, Ted Jenkins (VK3QK), some mammoth scores will be tabulated. In advance I would like to congratulate Dave Duff (VK2EO) for his mighty effort, whether it is a winner or not for the c.w. section. I won't steal the Contest Manager's thunder by announcing the colossal score accumulated by Dave but if it is not a winner I promise to publicly eat all the unclaimed cards held by Graham Roper, VK3ZB, the Victorian QSL Manager (that's a big task—Editor). So that you may work out Dave's score I will tell you that he averaged a QSO every 6 minutes of the entire c.w. periods and worked 86 countries despite the fact that Dave fell exhausted at the key at one period and slept for 5 hours during the best DX period on 14 Mc of the test. Dave's XYL knowing in her wisdom that there should have been no DX on 14 Mc. at the period mentioned, allowed Dave to blissfully slumber. Otherwise he may have made the DXCC through this contest period. His splendid effort shows what can be done with intelligent operating, a sound knowledge of DX conditions, efficient equipment and tenacity and endurance. 100 watts in the final and a 67 foot high zepp did the job.

Eric Trebilcock, BERS 795, still at Wynyard, Tasmania, comes to light with the following DX heard on 7 Mc. during recent week-ends: (c.w.) ZS, VQ5, VQ4, SM, FT, UO, UJ, UB5 (3 stations), F (18 stations), PK3, HB, PA, ON, GW, I, GI, D2, OH, G (21 stations). It shows that 7 Mc. is as of yore—if you can get away from the city barrage.

The following W.A.C. recommendations have been made since January last:—

VK2HI, VK2NP, VK2YC (28 Mc. c.w.).
VK3PG (28 c.w.); VK3GG, VK3YS, VK3YV (28 Mc. phone); VK3XK, VK3JA.
VK4UX, VK4RC; VK4EL (28 Mc. c.w. and mixed phone); VK4HR (28 Mc. c.w. and phone, 14 Mc. c.w. and phone).
VK5JS, VK5LU; VK5MP, VK5WG (28 Mc. phone).
VK6MU; VK6RU (phone); VK6KW (14 and 28 Mc. phone).
VK7LJ.

CORRESPONDENCE

Balcombe, Vic.

Editor, Sir,

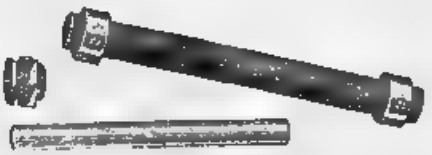
One searches "A.R." in vain each month for articles of practical value to the average amateur. It is the considered opinion generally throughout the ham fraternity that the present time is ideal for a periodical to cater for the needs of those about to study for a licence or those recently licenced

Surely the rigs used on 50 and 166 Mc., much ventilated in these pages, are not so hay wire that they cannot be produced on paper for the benefit of those in the categories mentioned above.

For you dear Editor I have mutilated my issues of "A.R." to paste the clippings hereon to improve this case.

$$E_{ant} = \frac{Z_{ant}}{Z_{ant} + Z_{in} + Z_x} E_{in} \quad (1)$$

YOU'LL BUILD A *BETTER* STATION . . . . ON AN *EDDYSTONE* FOUNDATION

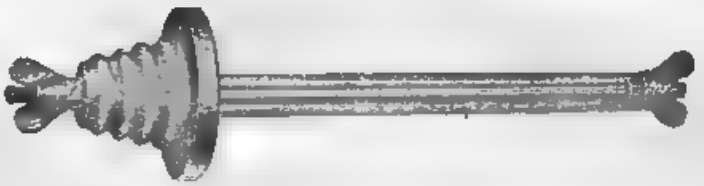


EXTENSION CONTROL OUTFIT.

The insulating portion of the outfit is made from precision drawn paxolin tube of high quality which cannot warp or bend. The length of the insulating part is 4", while the ¼" brass insert is 3" long, giving ample scope for length adjustment

Cat. No. 1008. . . . . 4/4

Here are just a few more of their famous Components for F.M. — A.M. — and PULSE



LOW LOSS AERIAL LEAD-IN

Consisting of special vitreous porcelain which will withstand the weather and has a long leakage path between the metal portion and earth. The tube itself is of ½" diameter. A special moulded watertight rubber washer fitted inside the cone prevents breakage and allows for errors in mounting.

Cat. No. 946. Length of glass tube behind insulator 5¼" 5/7

LOW LOSS 6-PIN COIL FORMERS

(Threaded or Plain Ribs)

These 6-pin coil formers are made of DL9 material, the outside diameter being 1⅜", with a winding length of 2½". The threaded formers are cut 14 turns to the inch.

Cat. No. 537 Plain Formers 5/3

Cat No. 538 Threaded Formers 5/11

STAND-OFF INSULATOR

Made from special quality white vitreous porcelain, glazed finish, with hollow centre. All metal parts being heavily nickel plated.

Cat No. 916 . 2/1

RADIO FREQUENCY CHOKE

D.C. Resistance	10.53 ohms
Inductance	1.5 millihenries
Working Range	60-1.5 Mc/s
Current Capacity	250 m/amps.

Cat. No. 1022 . . . . . 3/3

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RADIO PRODUCTS EDDYSTONE TRADE MARK

EDDYSTONE OFFERS YOU THE LATEST, MOST DEPENDABLE COMPONENTS for FM., AM., & PULSE

$$Z_{x\,par} = \left\{ \frac{C1}{C1 + C2} \right\}^2 \times Z_{par} \quad (3)$$

The first two extracts are from the October issue. I consider it safe to say that many of your readers "gave the article away" at first sight when these met their eyes.

If one needs a crystal filter in his receiver the necessary details regarding its construction are clearly set out in other hand books. Many Hams are concerned little whether Z_{in} plus Z_x enters into it or not

The following clippings are from "A.R." of February and May, 1947:—

$$i_1^2 r_1 + i_2^2 r_2 + i_3^2 r_3 + \ldots = W \quad (5)$$

From (4) and (5)—

$$Z_1 = r_1 + \frac{i_2^2 r_2 + i_3^2 r_3 + \ldots}{i_1^2}$$

$$= r + \frac{W - i_1^2 r_1}{i_1^2} \quad (6)$$

$$\text{area ratio } D/C = \left\{ \frac{\sqrt{Z_a}}{\sqrt{Z_1}} \right\} - 1$$

$$= \left\{ \frac{\sqrt{72}}{\sqrt{9}} \right\} - 1$$

equals $(\sqrt{8}) - 1 = 2.83 - 1 = 1.83$

diam. ratio $D/C = \sqrt{1.83} = 1.35/1$.

The diameter of D = 0.75-inch.

These articles used quite a deal of space without disclosing to the learner much useful practical information.

I am not criticising the writers of these articles, I would rather infer that the articles concerned deserve a place in a higher technical journal. I say that what the majority of your readers mainly desire is easily written articles which will assist them to put an efficient rig on the air, to obtain good reception through interference plus dope on rotable beams.

It would be quite wrong I know to suggest that some of the contributors produce these highly technical articles to advertise their considered technical ability, but this impression may possibly be created in some quarters. I venture to say that the two articles on folded dipoles "got no one anywhere."

The number of budding amateurs at the present time is enormous—these need encouragement — not fright. They desire articles to be described on their own level. Those with a background of algebrae can have easy access to well known technical manuals.

Articles similar to those I have mentioned would not be given space in a journal such as QST, the contributor would probably be referred to publications outside the normal amateur sphere.

Well now this is a plea for the starter in Amateur Radio, a plea considered amply justified but perhaps a little late. However I aim to give a lead in this matter by airing these views and any support or criticism which results from this letter may be a guide to you in your future planning.

Yours sincerely,

GEO E. EVERY, VK3GE.

FIFTY AND UP

COMPILED BY VK3QO

On Tuesday 28th October W6NYV was heard on m.c.w. by VK4FN and VK4BJ, in Brisbane and Bundaberg respectively, the time being 2100 hours E.S.T. Needless to say many were the calls and many were the ears glued to speakers following this exciting episode, but equally many were the disappointments.

It would be interesting to know what power W6NYV was using, and since the receivers at both ends could be assumed to be about the same, the lack of contact could have been due to the American not listening, or the VKs not having enough power.

Clarrie Castle (VK5KL) has at last received confirmation of his contact with W7ACS/KH6 on 50 Mc. on 26th August. Cheers o.m. and do it again. W7ACS is still running skeds with VK5KL at 1200 and 0230 C.S.T. W6UXN is also on from 1200-1300 C.S.T.

With reference to the VK5KL-W7ACS/KH6 contact, the Radio Research Board records have been consulted by the Australian Radio Propagation Committee with the object of ascertaining state of the ionosphere along the assumed great circle path of transmission between Darwin and the Hawaiian Islands, and it is found that predicted conditions for the month of August give maximum usable frequencies of 45 and 37 Mc at the Hawaiian and Darwin control points respectively, at 1200 hours Australian Central Standard Time. Since these predictions were about 10% low for August, you will see that the average m.u.f. for this circuit was about 41 Mc. (37 Mc. plus 10% of 37 Mc.).

Now normal day to day variations in F2 region critical frequencies can be as much as 15-20% above or below the average, so if we suppose that 26th August, 1947, was a normal day, it would be quite likely that F2 layer transmission between the places considered would take place on 50 Mc.

It is not anticipated that long distance 50 Mc. transmissions will be possible with any regularity (even in equatorial regions) but trends in sunspot activity and F region composition tend to show that over selected paths, such as the one under discussion, quite a number of contacts should be made from Northern Australia by trying at the right time. These conditions should prevail only for a few months, however, any opportunities lost now may not be regained for many years, since this sunspot maximum is reaching a high value which, following maxima, may not approach for the next few cycles.

VK5KL reports that on 5th October, ZS1P, on 50 Mc., worked a G (on 28 Mc.) crossband. 12th October W7ACS/KH6 made 20 contacts in one hour with stations in Stateside. 18th October at 1100 E.S.T. J9AAO worked CE1AH on phone to make a new record of approximately 11,000 miles. During October 12-13-14 at 1200-1300 hours in Darwin the band was apparently open towards U.S.A. as VK5KL could hear a phone station with QSB just outside low frequency end of band. On 28th October W1s were heard by G5BY and it is believed that he worked some crossband. J9AAO on c.w. was heard by W6UXN who used a kilowatt without result in trying to contact him.

INTERSTATE DX NOTES

On the 9th November about midday seven VK2s worked the VK5 boys and afterwards at 1400 hours 7XL reports following stations were worked from 7XL: 2BZ, 2ADT, 4KB, 4ZU, 4RY and 4CU. Reports were S8-9 all round. The VKs could not hear the VK4s and vice versa. 2ADT reported that he followed all the QSOs and re-broadcast 7XL on 7 Mc. 7XL contacted 7AB at 1730 on sked and a close watch was kept from then on. The band opened up again from 1820 to 1845 and again at 1900 for a few minutes, 7AB working 4ES, 4RY and 4ZU, while 7XL worked 4ZU, 4ES, 4FB and 4RY. 7XL and 7AB were running about 90 watts apiece in conjunction with rotary beams.

Meantime 7CW was on in Hobart but heard nothing. On Wednesday 12th, however, the band suddenly came good a little after 1930 and he worked 4HR, the first VK4 contact from that end of Tasmania on 50 Mc.

At 1930 on 9th November, 3RR heard 4PG moaning that he had been hearing 3ED, 3RR and 7AB since 1855. 4PG worked 3ED till 1948, then 3RR till 2003 with signals S9. 4ZU was S6-7 from 1945-2230 at 3RR.

Wednesday 12th at 1315 the band opened in spectacular fashion with 4HR working 3VL, 3HK, 3GE; 5GB worked 4HR at 1330. In the evening, VK2s, VK4s and VK7s were heard in VK5. At 1830 3BD and 2LZ contacted. At 1900 4ZU had a really fine contact with 7XL which lasted for 35 minutes with S9 signals both ways; 7AB also worked 4ZU at 2000 hours. The band was also open again on 13th, 14th, and 15th.

It would be appreciated by your scribe, if contributors to Fifty and Up would make their DX reports on standard log forms, accompanying same with their experiences and comments on a separate sheet. Send direct to 3QO, 32 Redesdale Road, Ivanhoe, Victoria

VICTORIA'S FIELD DAY

It was VK3's turn to have wet weather on their field day on 9th November. The stations out were 3YS-3ABA at Mt. Macedon, 3HK at Ridge Road, Mt. Dandenong; 3VL was at Arthur's Seat; 3MB went to Mt. Wirth about 10 miles from 3HZ at Warrigul; 3ABG was in wild bush

country on a 1600 ft. range 10 miles from Avenel. 3LS operated first from Mt. Bunninyong near Ballarat, then later at Pentland Hills, and 3RR operated fixed portable at Macrae.

Some good contacts were had by all on both 50 and 166 Mc., although on the latter band some QRM was noticeable.

50 MEG NOTES

3BQ 's locality is evidently affected by windy "Gremlins" who push his beam aerial down frequently; rather grim as Max is a very busy man and also as he very carefully tunes up each beam! Said "Gremlins" also visit 3RR. They bored a hole in a mica condenser in his 829B final with interesting results! Then they sneaked into his power transformer and chewed that up. 3BD erected a beam which projected slightly over his neighbor's property. Said neighbor moaned and insisted that beam come down; Nice People! 3VL made his first contact with 3GM at Ballarat on 16/11/47. 3VL and 3HK have been doing some portable work on their own lately at Arthur's Seat and worked 3HZ, 3IV, 3ZL, 3GM and 3SE (at Bunminyong).

VK4s have been reasonably active, 4HR was very disgusted on the 9th when the DX came through because he had given radio away for the day, having just painted his shack!

The V.H.F. boys in VK2 were delighted to hear of the success achieved by country members Alan Thackeray (2TA) and Ross Weedon (2PN) in making a two-way contact between Young and Tumut on 50 Mc. The distance is about 80 miles and represents the culmination of much hard work and enthusiasm over quite a period. City fellows cannot quite appreciate the helpless feeling of country Hams beefing out signals not knowing whether anyone is listening or not. Apparently this channel is to be a permanent one, as signals have been heard for two successive weekends on schedule as we go to press, with the aid of 2TC's superhet. Jim is another of the gang hard at work on the band. Others in the surrounding district are very keen to broaden the country chain, and this success should give them a new incentive.

VK5 boys have one comment to make to the VK2s using m.c.w. It is much better to read on a fading signal than c.w., but would be a lot better still if the carrier was keyed as well as the tone. In some cases it was impossible to use the b.f.o. as the carrier surge wiped out the modulation. When the signal went down the b.f.o. had to be switched in again to hear anything at all. For the interest of kid beaters and chalk spreaders in other States interested in 50 Mc. during the Christmas vacation, there will be a couple of VK5 stations on during at least part of that time. Contact 5QR for daytime skeds.

Heard that 5RT had a good QSO with 2AMI who was using 6 watts to 6V6s in p.p. feeding indoor aerial

hanging from back of his chair to shelf over his rig; S9 both ways! Who said QRO and beams!

Some good news this month—6GM is on the band with f.m. on 52 megs. 6FB of Mullewa is ready now using p.p. 807s with 22 watts (220 v. d.c. mains). Look for him on 51.77 Mc. after 8 p.m. 6HT and 6WG of Albany both ready and looking for contacts with Perth between 8 and 9 p.m. frequencies not yet known. 6RL of Northam still not yet contacted Perth, but with increasing possibilities of sporadic E, it should not be long before new records are established in VK6. The city regulars are still going strong with the contacts being made almost nightly. 6TC is busy erecting dual 28 and 50 Mc. three element beam. 6GM's first day on 50 Mc. was very successful, with good reports coming from 6GB, 6FC and 6LW plus others from some of the many enthusiastic s.w.l's now active on this band. Expect to hear many new f.m. signals on this band following the showing of the f.m. at the last W.I.A. monthly meeting.

In VK7 only reports are from 7AB who says that the only activity on the N.W. coast is himself and 7XL. They have kept skeds for 13 years on different bands and 50 Mc. appealed to them as a band all to themselves.

166 Mc. JOTTINGS

Things are very quiet in VK3. 3ACM wants me to say that 50 watts on an 815 at 168 Mc. is too much and if we get 144 Mc., full ratings will be O.K. 3ACM reckons cross-band contacts might stimulate activity.

Activity on this band is at a low ebb at the moment due no doubt to the necessity for keeping ears peeled on 50 Mc. 4XG has a super-duper rig nearly finished, a multi-band job which sounds rather like a dream rig if Gus' enthusiastic account is a criterion. 4ZU has put his 522 transmitter on 50 Mc. in readiness for prospective field days. 4KB and 4RT are playing around with converters, broad-banders and otherwise. The combination of 6AG5, r.f., 6AC7 mixer, and 954 oscillator is rather a good one as far as 4ZU is concerned. Signal to noise ratio is very good and the arrangement has a ton of gain.

4HR has very successfully converted his 522 to both 50 and 166 Mc. as has been recounted on a previous occasion, but Gus (4XG) intends adapting his to double conversion using one stage of 10 Mc. i.f. and a couple of 1600 Kc. stages later on in the line

5SP made his debut on the band on 23rd October. Quite a good signal using p.p. 7193 oscillator into a J antenna. Receiver, two tube super regen. 5GB can only be heard on this band on request. What's happened to the re-broadcasts on Sundays, Geo? 5JD has had the band to himself for the past two months Spent the time making some improvements (he hopes.). Is now preparing a rig for the jalopy—to be used on VK5's coming field day. 'Tis rumored that 5KZ will be more active in the coming months.

5JD's search for a means of reducing or eliminating super-regen hiss has had some result Remains now for others to adopt the idea and comment A condenser of 100 mmfd. is connected from plate to grid of the audio amplifier. This attenuates the highs, washing out most of the objectionable hiss. Larger values completely eliminate the hiss but with some loss of signal which may or may not be acceptable.

DIVISIONAL NOTES

NEW SOUTH WALES

Secretary: Peter H. Adams, VK2JX Box 1734 G.P.O., Sydney.
Meeting Place: Science House, Gloucester and Essex Streets.
Meeting Night: Fourth Friday of each month.

A discussion on Convention items was the chief business at the October meeting of the N.S.W. Division, held at Science House on 24th October, with President Morrie Myers in the Chair.

Rather too much occurred to be detailed here, but decisions were reached on all matters not previously dealt with, including the subject of "Amateur Radio" and the suggestion for a paid Federal Secretary of the Institute.

The general feeling of the meeting on this point is that whilst the Division agrees in principle with the idea, and even feels that sooner or later it is inevitable, it was not so enthusiastic concerning the method proposed to bring it about. Furthermore, the Division's own administrative problems, due to the great expansion made since the war, are sufficiently urgent as to give them a higher priority at present even over Federal matters.

Probably only the Victorian Division can realise the terrific amount of work entailed in looking after the requirements of more than 500 members scattered all over the State. That Division has already found itself requiring paid help on the job. A similar position might yet be forced upon N.S.W. if suitable arrangements can be made. We realise that stability and strength in the Division is of prime importance, without which there would soon be no Institute at all!

After considerable discussion the meeting endorsed its desire to see the uniform Federal Constitution brought into being, and members are hoping that some action on these lines will be forthcoming very soon.

The meeting also approved a motion allowing radio clubs to achieve Member Club status with the Division. A section of the arrangement allows Clubs having sufficient members, and sufficient Institute membership, to nominate an ex-officio member of the State Council, who will have direct access to any Council meetings where Club matters are discussed. There is also a provision whereby non-Institute club members will pay the ruling per-capita fee to Federal Executive, thus identifying themselves with W.I.A. Federal policy, and assisting its implementation It is hoped that the new plan will allow an official link with the clubs, not now provided for by the N.S.W. Constitution. Amendment action will be taken to the Constitution to include the new plan.

NEWCASTLE ZONE

The opening on 9th November of the 50 Mc. band saw some fine contacts. Details will be found in Fifty and Up. Newcastle stations are working to Sydney, Cessnock, Wyong and Toronto regularly on 50 Mc. 2AHA rebroadcasting 50 Mc. signals, results, some 7 Mc. gang building converters. 2CI has a converter on 50 Mc. and is working on the Xmitter and aerials 2PQ on 28 Mc with nice phone and is awaiting co-ax for the beams 2AGD building a really fine Rx and takes time off to work 28 Mc. DX. 2FP is taking things steady after DX Contest and has some 50 Mc. gear on the way. 2ZC resting after a fine DX Contest effort. 2TE nearly completed a new v.f.o. and is also putting up a dural 28 Mc. beam.

COALFIELDS AND LAKES ZONE

2YO busy with work and not active, has plans for rotary and revamped Rx for 28 Mc. 2KZ exclusively on that band and chasing W.A.S. 2KF no news of the newcomer although heard on 14 Mc. 2XT heard Sundays on 7 Mc., how about trying 50 Mc. for local work Bill? 2TY last heard of on 28 Mc. trying V beams for South America. 2PZ still not very active, better get some more gear perking Chris. 2ADT got a high placing in the phone section of W/VE Contest; spends most of his time on 50 Mc. and broke through to VK7

2YL at last established on 50 Mc. phone, using long wire antenna (a beam to be erected shortly); worked 28, 27, 14 and 7 Mc. in DX Contest. 2OC very keen on 50 Mc. and is on from 1900 to 2000 hours most evenings. 2RU keeps Gosford on the map with 50 Mc. activity. 2AEZ a keen 14 Mc. DX man with plenty of countries. 2KR very active on 7 Mc. phone, any news of activity in your area would be appreciated Cec.

WESTERN ZONE

2HC on 3.5 Mc. with nice Telefunken phone, genemotor power supply and V beam. 2IE mad with the DX, exclusively on 14 Mc. 2WH has cleaned up the quality and is fine now; V beam still won't work; has a new Bendix freq. meter. 2BT has AT5 working nicely with the assistance of a c.r.o., a new one. 2II has now a 28 Mc. beam above the 14 Mc job. 2AMR is still building super shack above the garage. 2ACT heard occasionally with good phone on 7 Mc. 2NS almost completed the rebuilding campaign, has another new Receiver.

2LZ heard on 7 Mc. one night using c.c.? 2HZ has shifted gear from the lounge room and is still building super Receiver. 2ALX working DX on 28 Mc. with AT20. 2TG still on 14 Mc.; DXCC should show up soon. 2ACU now at Coonamble using a AT5/AR8. 2ZX using full 100 watts plate modulation with excellent results. 2QA still settling in new house, intending to buid 14 Mc. beam. 2LY still rebuilding, undecided where to start. 2AFO and 2FI on the V.H.Fs. exclusively.

SOUTH COAST AND TABLELANDS ZONE

2AKE is using only 2 watts to a 19, modulated by another 19 and 135 volts of battery. 2DO, 2AKE and others are organising for bush fire emergency work. 2TC, 2TA and 2VS in the Young district are active on 50 Mc. 2TA has been heard by 2PN in Tumut. 2ALS with 4 watts phone and an AR8. 2ALD in trouble with buildings going up beneath his antenna

2GU using a m.c. on 7 Mc. phone. 2IT a new one from Moss Vale. 2ACU should be home again shortly 2ADI spent a week in hospital after turning over his truck, OK now. 2ANN on plate modulated phone, modulating the 813 with 830Bs. Congratulations to 2EO on winning the W/VE Contest.

SOUTHERN ZONES

2OJ rebuilt Receiver and very pleased, the tower is ready to erect for the beam, proceedings stayed with daughter's illness 2EU to quote: "dreaming up a new rig for the new QTH." 2ANQ rounded up shekels and departed for Stawell on leave, new rig nearly finished and an oregon mast painted ready for erection. 2VK relieving 2ANQ on the service bench, busy on a service oscillator when not talking filters with 2APW who is building xtal filter and works DX when finished on the b.c. station. 2VS transferred from Canberra to Young, did the boss see the "A.R." notes.

VICTORIA

Secretary: A. B. D. Evans, VK3VQ, Box 2611 W G.P.O., Melbourne.
Telephone: FJ 6997

Meeting Night: First Wednesday of each month.

Meeting Place: Radio School, Melbourne Technical College.

XMAS GREETINGS

As President of the Victorian Division I send greetings to all members and trust that a Happy Xmas will be with us all. There is a lot of activity in the hands of your Council right now and the New Year should see rapid strides in general Divisional affairs We are busy on the beam, but always have time to listen to news and views—whenever you like.

Lots of DX and 73
Bob Cunningham, VK3ML

It is evident, once again, that the fullest interest and enthusiasm of members is shown by their attendance in numbers at the general meeting held in Melbourne on Wednesday, 5th November.

At this meeting our President introduced Mrs. O. I. Cross who was appointed to the position of administrative Secretary to the Division and was warmly received. Mr. Cunningham enthused on the prospects of future organisation of Divisional affairs that must follow this appointment.

Welcome visitors to the meeting were Mr. Ross Harris (VK5FL), well known South Australian Divisional Councillor, who presented viewpoints on behalf of his Division. Mr. Frank Russell, from Portland, Oregan, U.S.A., who operates a rig under the call sign W6XVK, and Mr. A. G. Sabin, VK2AGS, also visiting Melbourne. Mr. Compton, VK3AMG, who was present, advised that he will accompany the "Wyatt Earp" on its South Polar Expedition as far as Heard Island and will operate from that location. Many interesting QSOs should result from contact with VK3AMG during his stay on Heard Island.

The recommendation of Council to increase subscriptions was put to the meeting and unanimously carried. The new rates to operate from the forthcoming financial year are as follows:—

Metropolitan Members: Full 25/-, Associate 22/6, Student 10/6.

Country Members: Full 22/6, Associate 20/-, Student 10/6. (A rebate of 2/- is made to Zones in the case of each Full and Associate membership subscription)

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI, Sundays—
1100 hours E.S.T., 7190 Kc.
2000 hours E.S.T., 50.4 Mc.
No spot frequency checks will be available from VK2WI.

VK3WI, Sundays—
1130 hours E.S.T., 7196 Kc.

VK4WI, Sundays—
0900 hours E.S.T., 7100 Kc.
0900 hrs E.S.T., 14358 Kc.
0900 hours E.S.T., 52.4 Mc.
Frequency checks are given two nights weekly. Hours are announced during the Sunday broadcasts.

VK5WI, Sundays—
1000 hrs. S.A.S.T., 7195 Kc.
Spot frequency checks may be obtained from VK5DW on Friday evenings on the 7 and 14 Mc. bands.

VK7WI, 2nd and 4th Sundays—
1030 hours E.S.T., 7174 Kc.
No frequency checks are available from VK7WI.

Entrance fee will be 10/6 for all grades.

Every month shows an ever increasing number of applications for membership and many new members were admitted at the last meeting night. During November, Council and Magazine Committee have met twice in conference to more fully co-ordinate the organisation of activities of the Division and of interesting note to all, to take steps to bring the magazine more into line with the wishes as expressed in many quarters

The Division have contributed a sum of money to Federal Executive toward the cost of production of certificates to be presented by the W.I.A. for the annual events of the year

The A.O.C.P. course for non-licencees, specialised by the Institute, commences on the 15th of January, 1948, and is already rapidly filling with applicants. Those desirous of joining this class would be well advised to direct their enquiries and applications to the Administrative Secretary in time for inclusion.

The first general meeting of the new year will be held as usual on the first Wednesday of the month, 7th January, 1948. Meeting place will be announced from 3WI.

At this meeting it is hoped that more fuller details of the State Convention, already contemplated by Council to be held early in the new year, will be announced.

TECHNICAL ADVISORY COMMITTEE

T.A.C. Meeting

The Committee discussed alterations and adjustments to VK3WI, and by the time these notes appear, 3WI will have a new antenna, which, it is hoped, will give a greater State coverage. A new modulation transformer will be installed shortly which should help to clear up the quality generally.

V.H.F. Group

At the last meeting of this Group, Mr. Glover gave a demonstration of the calibration of Absorption Type Wavemeters for the very high frequencies. The last field day was discussed, and it was decided to hold alternate 50 Mc. and 166 Mc. field days in the future; the next field day to be held on the 7th December on 166 Mc.

Receiver Group

Mr George Neilson will deliver a lecture on the modifications made to the AR7 receiver at the next meeting of this Group. Some interesting points are expected to be brought to light in this lecture, so come along.

General Meeting

At the November meeting, Mr. Moriarty, of the P.M.G's. Depart. delivered a lecture on Propogation with particular relation to V.H.F. transmissions. The lecture was appreciated by all, in particular the V.H.F. gang, who were given an insight into what effects might be expected when they start to approach the Centimetric wavelengths

"FOOD FOR BRITAIN" APPEAL

Another 25 parcels will have been despatched by the time these notes appear, making the total now 175. The total receipts to the Fund are gradually creeping up and are now £193/9/5, the total expenditure on parcels £159/1/- and the cash in bank £34/8/5.

At the last general meeting, the items to be raffled were 9002, 9003, and 6J6 miniatures and a 455 Kc crystal, which were won by VK3ZC, Mr. John Tutton. The new Divisional Secretary (Mrs. Cross) made the draw, and the raffle yielded the sum of £10/4/-. The box collection yielded a further £7/16/3, making the total for the night £18/0/3

Details of a Technical Quiz, to be run in conjunction with the Appeal, are being worked out. The preliminary plans are to arrange for teams of four contestants to meet other teams of four in a series of elimination rounds, winner to compete for a substantial prize. There will be an entrance fee for teams which will all go into the Patriotic Fund for food parcels. This contest will not only stimulate interest in questions on technical subjects but should help the Appeal along. Listen to the weekly broadcasts from 3WI for further details of this Quiz Think it over, and get your teams ready.

We acknowledge, with thanks, a donation of £2/10/- from the South-Western Zone from surplus funds for the first six months of operation. We also acknowledge, with thanks, the donation of a National Union 807 from W. H. Ross, of Grasmere, for a raffle held at the Annual Dinner.

Send your donations to your Zone Organisers or the Appeal Secretary, VK3UM, who will also receive postal notes for raffle tickets. Your donations, however small, will be gratefully received and faithfully applied.

CENTRAL-WESTERN ZONE CONVENTION

What a day, 9.15 a.m. to 3.45 a.m The Maryborough Convention went very well despite the slip ups. Among those present were VK3s GN, IQ, DP, YW, ATR, XC, AGR, ML, BM, TL, IK, Bill Sawyer, Wally Loveland and Bud Page. Notable vacancies were the Horsham gang; 3AGB had had it so stayed home, 3HL had to stop home and count Callawadda's numberless votes; apologies came in from 3AX, 3EP and 3AKW.

50 Mc. field day, scheduled for the afternoon, was a complete washout for it rained and nobody's gear came up to scratch. However we filled in the time by visiting 3CV where a very interesting time was spent looking over the gear there and admiring the 250 odd ft. top-loaded mast, just the thing to put 50 Mc. beams on. Then back to Maryborough for a visit to 3XC's shack, where a real Ham's dream was on show; little Willie has a simply stupendous Tx there

After dinner, we adjourned to the library for the formal part of the programme. Perhaps the most important and informative part of this was the State President's address. 3ML covered a wide spectrum, and left each and everyone of us with the feeling that here at last was the W.I.A. in action. Bob sketched out his ideas for the betterment of the Division, ideas for the betterment of each Zone, ideas and ideals to wield all the more or less disjointed parts into one homogeneous body with one objective and a definite policy to work for in the future.

Members greatly appreciated the President's attendance at Maryborough, and the view was expressed that visits such as his would go a long way towards reducing the feeling of isolation common to many country Hams

After the meeting, and with the aid of 3ML's Type 3 Mk. II, and 3XC's Amplifier, Bruce Mann (3BM) put on an excellent demonstration of what a c.r.o. will show up on a transmitter. Bruce brought along a tremendous amount of gear and ably and aptly described its construction, function and interpretation. Bruce was warmly thanked for his efforts.

Two of the main decisions possibly were the suggestion to Council to organise a State Convention at a date and place to be fixed, and for the Central Western Zone to hold another Convention before the summer ends.

Note to all Zone Members.—Do not forget Zone Hookup on Sunday, 14th December, 1000 hours, 7050 Kc.

NORTH EASTERN ZONE

Zone members are particularly requested to save their pennies and "sevenpences" for a bumper December contribution to R.S.G.B. Appeal. Forward to 3YV, Wangaratta.

3JK is back on 28 Mc. c.w. 3YV on 28 Mc. phone and has renewed schedules with GW3AX who is a very well known South Wales Amateur New rig at 3YV operating satisfactorily on 7 Mc. and 14 Mc., although not active on 14 Mc. to date. 50 Mc. gear on the way at both 3JK and 3YV.

Regret the possibility of losing Bert (3TM) from our ranks, our loss, somebody else's gain. 3SN is active again on 14 Mc., pleased to hear your old fist again Dud. 3AT on 14 Mc. and quite pleased with renewing W contacts. Using a Franklin oscillator and it works well. 3BP heard on 7 Mc. phone, maybe you will be in the Zone Hookup o.m. Third Sunday in the month at 9 a.m. just as a reminder for all members.

3APB also contacted on 7 Mc. phone and running skeds with 3BP. 3UI reports having erected a Lazy-H antenna for 50 Mc. and now has 24 hour service with 3ABG in Avenel on this band. 3DW and Mrs. Tacey recently completed tour of Eastern Victoria, calling on 3KR, 3YV, 3JK and 3WE. Ted O'Brien and Peter Fawcett, both Shepparton lads, sat for last exam and eagerly awaiting results, best of luck chaps.

Please forward any notes you think may be of interest to reach 3DW not later than the 7th day of each month.

North Eastern Zone members extend the Compliments of the Season to all other Zones and to the Amateur Fraternity generally, and look forward to a progressive 1948.

NORTH WESTERN ZONE

3TL and 3BM, Associates Wally Loveland and Bud Page made the 130 mile trip to the Maryborough Convention. Had an f.b. time despite the rain Must admit however (a) we didn't see much 50 Mc. gear; (b) that familiar voices sometimes issue from mighty strange faces!

3TL has increased his power with a pair of 809s in the p.a. and at same time improved his phone quality. Has built an f.b. indicator for rotary beam. 3OA is working on a 14 Mc. receiver on a No. 11 chassis. 3JG was heard working Yanks on 14 Mc. What say you give us a shout on our 3.5 Mc. hook-up on a Sunday morning Johnny, 3CE, like 3BM, will soon be too busy with a bumper crop to play at Ham Radio 3BM has erected two more legs to the V beam setup and can now work North, Central and South America and Europe

Wally Loveland and Bud Page are to be congratulated on their election as Associate Members. Wally is an amplifier fiend an an f.b. direct-coupled d.c. job of his design was recently featured in "A.R.W." Bud built a 50 Mc. receiver to take to Maryborough but at the last mintue, like everybody else, he left it home. We hope these two keen chaps will soon be ready to try for their tickets.

QUEENSLAND

Secretary: R. Thorley, VK4RT, Box 638J, G.P.O., Brisbane.
Meeting Place: State Service Building, Elizabeth Street, City.
Meeting Night: Last Friday in each month.

Seating accommodation was at a premium at the October general meeting of the Queensland Division, the attendance being a record for any post-war meeting. Membership is nearing the 160 mark, which is a most pleasing state of affairs all round.

The Secretary (4RT) gave a full account of the Disposals purchasing activities over the last few months and announced that although many dissappointments had been encountered the picture was at last beginning to look a little brighter, and as we write these notes we learn that we have succeeded in acquiring a large quantity of 522 units and also have managed to purchase some 140 Class "C" Wavemeters. These last items will be for sale to members at a sum of 30/-, so if you fellows want a cheap v.f.o. there may still be a few left by the time you read this. Of course you may want one for a frequency meter, for which purpose we believe they are OK by the R.I. Department.

The quantity of 522s is rather considerable, and we have also got kits of spares for same, comprising 4 crystals, sundry plugs and cables.

It is pointed out that in some cases it is not possible to circularise all members with regard to Disposals buys, because of the fact that sometimes cash has to be called for and collected and the transaction finalised before circulars could be prepared. Such instances are in the minority however, and members need not fear that they are missing out on juicy items such as HROs, etc., there just are none to be had!

A few facts on the wallpaper situation. During the six months ended October, cards posted to VK4s intrastate: 414 packets. To interstate and overseas, 295 packets posted; while cards received at Bureau from overseas and VK4s for forwarding number in all 226 packages. For the year to date, cards to VK4s, intrastate, 634 packets. Interstate and overseas 442 packets. Incoming cards from interstate and overseas totalled some 351 packes. Maybe you didn't think there was so much to being QSL Manager, but Eric Neale, 4EN, has handled the job superbly, and it is to try and make his job a little easier that all this is presented. It's all right, we are not finished yet, so read on!

For the department to function smoothly the following duties must be performed: Stamp journal to be kept, postings account and journal, sorting, wrapping, addressing, weighing, stamping and posting. Another point to bear in mind is that the Bureau does not pay postage on cards out-going from the Bureau to YOUR QTH. A free out-going service is available however to all financial members for cards which are being sent away. Cards are posted direct to all countries during the first week of each month, all "W" cards being posted direct to the district managers. Cards for VK2-9 go forward at the discretion of the QSL Officer.

Any QSL card will be forwarded individually under separate cover provided a stamped envelope is provided to cover air or surface postage as desired. Members who cannot get along to meetings should send along stamps to the QSL man occasionally to take care of any cards held for them. Cards WILL NOT be held indefinitely. To conclude, following is a list of VK4s for whom cards are at present held and for whom no stamps are held: VKs 4AE, 4AS, 4AH, 4AG, 4AO, 4BR, 4CO, 4CX, 4CJ, 4CM, 4CS, 4CT, 4FY, 4GH, 4GL, 4GX, 4HH, 4HW, 4HP, 4KK, 4KF, 4KC, 4NW, 4NX, 4NL, 4PC, 4PL, 4RS, 4RG, 4RB, 4SA, 4TB, 4VU, 4VG, 4WB, 4WG, and 4WO. How about it fellows?

It has been a feature of these notes from time to time to appeal for a little dope from country men; and we are happy to say that the gong has at last been rung (come to think of it—do you "ring" a gong?). The joke is that Fred Lubach (4RF) is the good samaritan, and he is an ex-city man. In a breezy letter he tells of Ham doings in Dalby, the other locals being 4DA, 4XN and 4KZ. DX seems to be quite plentiful up there and Fred enclosed a list a yard long, the top line being fairly representative. FQ3AT, HZ1AB, ET3AF, VO3X, EP1AL and UO5AC. 4XN does a bit on 14 and 28 Mc. and finds time to sandwich a bit of photography in between. 4DA has moved into a house with d.c. only and is installing a rotary converter. 4RF is running 100 watts to an 812 with a v.f.o. using

6SK7, 6SK7, 6F6. The antenna is a 67 feet matched impedance.

The Ipswich men were present in force at the October meeting, and one of the gang, 4WS, recounted his experiences in crystal grinding during the technical discussion which took place. Some of those who had had experience in subjecting crystals to x-rays reported on the great increase in activity as a result of the treatment. The process is restricted to certain cuts however, so there will be no necessity to race off to the nearest x-ray machine.

In the recent disastrous train smash at Tamaree near Gympie, one of those injured was Frank O'Sullivan (VK4UK) who as a result is an inmate of Gympie Hospital. We do hope that you are out by the time you read this o.m., and wish you a speedy and complete recovery. Following a suggestion by 4RT at the October meeting, a parcel of comforts was dispatched to 4UK. We believe that the local Hams from the surrounding districts have also paid visits to the hospital.

Discussion has taken place of late regarding the formation of a Technical Development Committee, with the object of eventually establishing a permanent headquarters station for this Division, and also establishing a Frequency Measurement Service for the use of members. The present setup which actually could hardly be bettered is dependent on the generosity and time of a Council member (4FN if it's not known to all) and we cannot impose on Frank indefinitely

Well, its the end of another year—a year of uninterrupted Hamming—and as is customary at this time of the year it is the wish of the Executive that you all have a very Happy Xmas and all the DX that you could possibly wish for in 1948, and our grateful thanks for your loyal support in 1947.

SOUTH AUSTRALIA

Secretary: E. A. Barbier, VK5MD, Box 1234 K, G.P.O., Adelaide.
Meeting Place: 17 Waymouth Street, Adelaide.
Meeting Night: Second Tuesday of each month.

The monthly general meeting of the S.A. Division was held at 17 Waymouth St. on Tuesday, 11th November, when over 110 members and visitors were treated to a first-class lecture by Mr. Murray Higgins (5QM). Among the visitors were Messrs. Laidlaw, Fitzpatrick, Hughes and the Hams included 3GR, 5QI, 5LP, 5TL (Ceduna), 5MN (Snowtown), and 5TR. An apology was received from a YL ships' operator, Klara Eide, of the "Heogh Silver Beam," who had unfortunately left port that day. Ross Harris (5FL), who had returned from Melbourne that day, gave members a short talk on the Disposals gear which may be soon available, and great was the excitement thereof.

Murray Higgins then launched into his lecture on "Audio Frequency Technique," which turned out to be one of the most interesting to date. Murray opened his remarks by gently kidding us that he was just a novice at audio and that we were a lot smarter than he, and so well did he "kid" us up a tree, that when he chopped the said tree down, you could have heard us hit the ground all over Adelaide. A good deal of his lecture was given on the blackboard and the remainder was a practical demonstration of triode versus pentodes and a example of frequency attenuation as applied to amateur transmissions, whilst Murray probably did not tell us anything we should not have already known, it was surprising just how much he told us that we had forgotten, and he told us in such a way that we soon realised that he knew his "onions."

His changing over from triodes to pentodes and vice versa was so good on speech or music that nobody could pick the change nor whether we were listening to triodes or pentodes, and as I said before the lecture was a huge success, with all present quite enjoying having their legs gently pulled by an expert in that art. A vote of thanks was passed by Dr. Adey (5AJ), who during his remarks mentioned "loop" phone much to the consternation of "Luke" Lucas (5LL) who was once (in the good old days) a staunch supporter of "loop." Fortunately Dr. Adey did not continue for long on "loop" phone and any danger of "Luke" having apoplexy was avoided. By the way, to finish the leg pulling Murray Higgins is only Broadcast Engineer in Charge of Studios for the P.M.G. Is our face red!

In a write up in a local paper our Hon. Secretary ("Doc." Barbier) was described as "bushy browed" which conjures up a picture of a fierce tough guy. Those who know him best were the most amused. There is no truth in the rumour that he is hiring himself out frightening children off to bed, but maybe he would consider an offer from Hollywood as a standin for Boris Karloff!

The local s.w.l. gang in VK5 are divided into two camps and both are publishing magazines which reflect the greatest credit to those responsible. I happen to know that several of those who are doing such good work on these magazines are also members of the W.I.A. Pity we can't use them!

Twelve months ago 5PS was given the job of organising a field day. Freshly admitted to Council and eager and enthusiastic, he rushed right out and commenced organising All he succeeded in doing was falling flat on his "puss" and why? Well 5JE can perhaps tell you now, because he attempted to organise a field day at the last general meeting Not only did he fall on his "puss," but most of the members walked all over him. You should know by now Ted, that you don't ask for volunteers, you do it all by yourself, lead the members by the hand, both feed and dress them and see that they have a good time, that's what God made Council members for! Anyway you have my sympathy Ted.

I am not usually profane and if the Editor passes this paragraph then I think you will get a laugh. A certain unnamed Amateur was foolish enough to leave his young hopeful alone in his shack with several 807 valves on the table The youngster knocked them all off the table and smashed them into a thousand pieces. The old man did his block and when the XYL was reproving the lad she said, "I'll bet your Dad said plenty to you." "No," said the lad, "he was

not talking to me he was only talking to Jesus." I crave your pardon fellows, but it made you laugh didn't it? (I hope he didn't have the "mike" open at the time—Editor.)

Thanks to the efforts of 5LW a little more news is available this month, to wit. 5GF is doing a good job with modulation on his baby Type A Mk. III, working all VK on 5 watts. 5LW has restored to its original position his 8 half-waves long wire instead of leaving it mixed up with the Scotch thistles where it has been since the storm of several weeks ago. We will probably hear DX tacked on to the famous CQ now. Talking of the storm, 5TR lost his feedline to his 2 element rotary beam which has been doing good work on DX phone.

5AK contacted KH1FQ on phone using 10 watts and the QSO was 100 per cent. both ways. Who wants QRO? 5HR is changing from cathode modulation to 6L6s class AB1 and it is now being hooked to the final. No more will the grape vines thrive on the 5GL r.f. as the new 28 Mc beam is almost in the sky, a slight delay being caused by pipe shortage. 5YQ is back on the air again after taking the count with a week's illness. He is using a Type 3 Mk. II whilst rebuilding a bigger rig.

5BY also hitting the high spots with 20 watts to his Type 3 Mk. II contacting OK2DD, G3FS, F8MI, F9DZ, HK1FU, KM6AB and MD5PC. 5VO is active on 7 Mc. and has a f.b. signal from a single 6V6. 5BZ absent with flu from general meeting, but OK now. 5GD also absent but so far have not heard why.

It's been often told that telephones destroy the personality of one's voice, of course that is when one has the so called personality, but when one is so often mistaken for the office boy—or was it girl—one can easily understand just where the name "Pansy" comes into the picture. (I'll bet 5PS will have a fit when he reads this—Editor.)

By the time you read these notes it will be Xmas so I will take the opportunity of wishing you all the Compliments of the Season and may the New Year bring you all you wish yourself and don't forget fellows, I don't mind how many of you have a "shot" at me, its all news! which helps to push this great hobby of ours along.

NORTHERN TERRITORY NOTES

Activity is not very great amongst the chaps due to different technical troubles, etc.

VK5AE (Dave Medley, ex-VK3MJ) is active on 28 Mc. with low power rig and four element beam. Quality is not the best and trees around the beam screens it quite a lot. Dave has found he can work DX and believe he has the bug. No sign of getting on 50 Mc. yet.

Noel, VK5NR, is QRL working on a super pro receiver. A recent Disposals purchase —...— VK5SA started off in c.w. contest but gave it away. QRM and poor conditions were no enjoyment. —...— VK5QV is inactive due to transmitter trouble. He tried taking a few plates out of doubler tank condenser, result was no capacity at all. —...— VK5AB shifted QTH to Katherine and hopes to be active from there. —...— VK5AY (Bruce Aubrey) has been very quite, maybe trying to find the reason for the handsaw note.

VK5KL has a three element beam, T-match to a Amphenol 300 twin lead. No trouble to raise the DX now on 28 Mc. Still watching 50 Mc. for an opening. Believe missed a chance on 12th and 13th October in the afternoons. NPM commercial in Hawaii was audible and harmonic of c.w./b.c. station, also another commercial. Has received QSL from W7ACS/KH6 re his 50 Mc. contact. —...— VK5AV bought a lot of gear at Disposal sale. No signs of getting back on air yet. —...— VK5CN, nil heard of but possibly the skip on 14 Mc. prevents it.

WESTERN AUSTRALIA

Hon. Secretary: W. E. Coxon, VK6AG, Howard St., Perth, W.A.
Meeting Place: Builders' Exchange, St. George's Terrace, Perth.
Meeting Night: Second Monday in each month.

A large attendance filled the meeting place on the 10th November, 6GM presided, keeping the business brisk and to a minimum, leaving the majority of the evening for instructive entertainment.

A sound film lent by the Department of the Army, on "Frequency Modulation," kept the audience very

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attentive. F.M. is considered by many as a difficult subject to approach and describe, but we have no hesitation in applauding this particular film Many VK6s went home with a much clearer picture in their minds, of f.m. than they had previously. A vote of thanks was passed to 6OR for his efforts in arranging the loan of projector and film from the Army.

New members: VKs 6JW, 6AY, 6XG, 6AF, 6WP, 6TP. These bring our membership to 83% of the total licenced Amateurs in VK6 today.

PERSONALITIES

6LM getting RA-10-FA going with false front panel on side, and running controls in through common plug hole. —...— 6CP has a Bendix and should be on the air shortly, just waiting for the driver unit. Clarrie is building a 50 and 28 Mc. converter too. —...— 6FD is using his Bendix Rx and Tx. —...— 6WT was pleased to introduce 3TZ to 7GR last month. A very f.b. 4-way QSO resulted with 6AH, 3TZ, 7GR on 7 Mc.

6AH works all the DX on 7 Mc. W, PK, ZS, VU, VS7 and VS2 being only some of the f.b. contacts made. —...— 6WS is getting about the country with his small ex-Army Transceiver. Heard working 6AH, 6FD and Perth from Boyup Brook. — ..— 6NL is a real v.f.o. man now. Vic discovered that "not all works well that looks well." At any rate he has the "darn thing" working OK now.

6TX on the air at last. Jack has a new rig and is to be heard on 7 Mc. —...— 6DF is a No. 19 fan. A really f.b. portable is now owned and operated by Maurie from the well known V8. A trip to Merredin proved what these versatile outfits will do. —...— 6JS heard regularly now on 14 and 7 Mc. Ask him how to erect long wire antennae. Flying kites is a bit hard for the grown-up, isn't it Jack? —...— 6AP increasing power to 100 watts. With the new rotary beam Alf is going places. —...— We believe 6WZ knows quite a bit about the doings of the Geraldton Hams How about letting "A.R." into it o.m.? Contributions can be sent to 6KW before the 10th of the month.

6EL still looking for his W.A.C. Those elusive South Americans don't seem to come Ern's way. Never mind o.m. they will appear when you least expect them. —...— 6KW is rebuilding his beam. Rumour has it that he is going to build a 50 Mc. array. —...— 6RU has well passed the century in countries worked postwar. Jim's trouble now comes—getting the cards. —...— 6FL not heard so much lately. Frank has evidently some more irons in the fire. What's on o.m.? —...— 6HT is another country Ham who we feel sure could help "A.R." along with some local notes. How about it Harry? —.. — A consistent G schedule on 28 Mc. is held by 6HL with G5OV. Cecil on the other hand works VK6 every day.

6AG was heard giving the W.I.A local broadcasts on Sunday mornings last month, during the temporary absence in the country by 6WH. —...— 6FW is now in chains. Not bad bonds though as they are held by the XYL Yes he went and done it. Congrats o.m. —...— Between furniture making 6HS is heard on 14 Mc. Makes some good DX contacts too. —...— 6MU is a well known Merredin Ham who has done some good work for the W.I.A. How about some notes for "A.R." Mal? Let's know the Merredin doings. —...— 6MY pops up on 14 or 7 Mc. when we least expect him. Not a DX hound—yet. —...— We all feel sure that 6DX could complete our country notes for "Amateur Radio," and let us into the secrets of the Goldfields. What say Bill o.m.?

DX OF THE MONTH

The annual DX contest, sponsored by the W.I.A., is once again over (thank heaven) and although conditions could have been far better, some of the DX was very tasty both on 28 and 14 Mc.

As seen in a previous issue of this magazine, the rules provided for phone operation over the first two week-ends of October and c.w. operation over the last two and these notes cover the phone section.

The score at the end of the two week-ends stood at 49,980 and made up of 238 QSOs in 70 countries on 28 and 14 Mc.

28 Mc. Phone, Europe.—This continent provided the bulk of the contest contacts on this band. The Gs being too numerous to mention. GM8NW, 2IQ, Scotland; GW3UO Wales; PA0ALO, QFB, QOD, QNG, OQJ, OAN, Holland; OZ3HR, 9Q, Denmark; EI3J, Eire; LX1JW, 1SI, Luxemburg; D4APN, 4ACD, Germany; HB9ET, Switzerland; SM5RF, Sweden; I1XX, 1MH, Italy; OH2SE, Finland; OK1JB, Czechoslavakia; ON4WS, Belgium, were all short but 100% QSOs.

Africa.—The Union boys were all there calling CQ-VK, and among those worked were ZS6EG, 6IW, 6NE, 5U, 5DA, 5BS, 6FD, 5BR, 5FJ, 6JB, 1AX, 6EU, 6BW, 6LF (and we could keep going for a few more lines); VQ4ERR, Kenya Colony; MD5TS, 5AF, SU1WS, Egypt; ZS6OL, Buchuanaland; VQ3PYE, 3EDD, Tanganyika; ZE2JA, Southern Rhodesia, OQ5BA, Belgian Congo; ZS4P, Basutoland.

North America.—Strange as it may seem, the Ws did not break through in the numbers expected, and altogether less than 20 were worked. VE7EL had a terrific signal and provided the only Canadian contact. KL7KB, Alaska, was the only other QSO. A nice catch the other evening was VO2Z, Newfoundland, who was worked across Europe, but not in the contest—sad luck!

Central America.—Only a few QSOs resulted from this area, i.e. XE1A, 1FE, Mexico, and KZ5AZ in the Canal Zone of Panama.

South America.—The chaps heard from this continent were HKs, but time did not permit the usual chasing. HK3AB, Colombia, was the only QSO.

Oceana.—This area came good with numerous contacts from Hawaii to the Phillipines, although the ZLs were absent in numbers as only one was worked. KM6AV, Midway Islands; KG6BT, Guam, KH6LD, 6BI, 6DF, Hawaii; KG6AW/VK9, Admiralty Islands; KA1CB, Phillipines, and numerous PKs all provided extra points.

Asia.—When one wants to work Js, etc., the devils just won't come back, and the response from the Northern Pacific Islands was very poor. J8AFK, Korea; J9AGT, 9AAS, Okinawa, C1CH, China; XZ2YT, 2DN, Burma, VS1BJ, 2BU, Malaya, PK1RK, Java; VU7JU, 7AB, Bahrein Is.; CR9AM, Macao, were some of those worked.

14 Mc. Phone.—The best time on this band was from early Saturday morning (0100) onward, until daylight, with the beam on Europe.

Europe.—Most QSOs were with Gs, the best being G5VM, 8PD, 6WX, 8QX, 6XR, 5OV, 3DO, 2UZ; GM2UU, Scotland; PA0GN, OFB, Holland; ON4VK, Belgium; D4AUG, 2KW, Germany; F9BE, 9DH, France; OZ9Q, Denmark; SV1WE, Greece; HB9FU, 9ET, Switzerland; I1AKF, Italy; EI3J, Eire. All good multipliers.

Africa.—Quite a few of the gang from last year's contest came to light from the Union. ZS5M and 6CT were two in particular, while from farther north came VQ4NSH, Kenya Colony, at 6.30 a.m., ZE2JG, 2JO, Southern Rhodesia; MD5AB, Suez Canal Zone.

North America.—Ws have been quite plentiful during the evenings and one QSO was made in the early morning across South Africa which shows that last summer's early morning QSOs are not far off. VE4IF, 3HC, 3ACO, from Canada, were good point "getters."

Central America.—XE1A, Mexico, VP9F, Bermuda, at 0430 Saturday morning across Europe and HH2CW, Haiti, were the only three from this area.

South America.—The most consistent South American to be heard here, HK1FQ, Barranquilla, Colombia, has been worked quite a few times now from this State.

Asia.—ZC6JL, Palestine, was a good catch one morning about 0700, VS7JB, 7IT, Ceylon; VUs from India in droves and quite a number of Js, VSs, Cs, etc., which were all welcome from the "points" point of view

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H2 FP

TASMANIA

Secretary: J. Brown, VK7BJ
12 Thirza Street, New Town.
'Phone W 1328.
Meeting. Place:. Photographic Society's Rooms, 163 Liverpool Street, Hobart.
Meeting Night: First Wednesday of each month.

Thirty-seven at the November meeting and still they roll in. Half an hour before proceedings opened, 7LJ cranked up the buzzer with some good old fashioned morse practice for the benefit of the rising generation and for not a few of us who could do with some, anyway.

After the minutes were read, announcement was made of the new Advisory Committee: 7XA, 7CT, 7ML, 7EJ, 7NL and 7RF.

Progress of the Food-for-Britain Fund, which is now £58 to the good, was reported by 7XA, who has to hand a letter of appreciation from the R.S.G.B. We are hoping the various difficulties of getting the food over there will shortly permit us to earn the appreciation.

Further news of the Tourist Bureau's QSL cards is rather scarce at the moment, but it is understood that the submitted design is under consideration by them.

A D/F field day was fixed for Sunday 23rd. Again it is to be a place within 15 miles radius of Hobart G.P.O., but, as nearly everyone seems to get there by some means or other, a points system is to be tried out this time with a view to reducing the importance of horsepower and encouraging accuracy (my 8 small horses will appreciate the first item!). Points are to be allotted on a basis of mileage multiplied by five plus time in minutes, and the lowest number wins. 7KA takes the transmitter. He has been muttering darkly about coal mines and badger traps, so there is likely to be some hard work done that day.

7YY gave an account of his recent week-end in Launceston, where a couple of the lads still seem to be in the doghouse for their long hours spent in the DX contest. 7AB and 7XL were down from the northwest, and visits were paid to 7LZ, 7BQ and 7RK. Very enjoyable, too.

Lecturer was 7TR, who gave an interesting talk on his adventures with modulators and Franklin oscillators.

NORTHERN ZONE

The event of the month was, of course, the DX contest and it was pleasing to hear the VK7s working the c.w. section. In this Zone 7RK, 7DS and 7LZ were the only stations participating and their activities were confined mainly to "normal" hours. We however gave the DX stations a chance for the additional multiplier —what's more we kept Tasmania on the map. Lou (7LJ) was heard in Launceston quite a few times at S5 during the test.

7AB, 7XL and 7YY were all in Launceston for the November long week-end holiday and on the Sunday morning an informal gathering took place in 7BQ's shack. 7AB had his 50 Mc. converter with him. This was extremely interesting to 7BQ and 7LZ. 50 Mc. was the main topic of conversation. 7YY, 7BQ and 7LZ afterwards called on 7RK.

Mr. P. Dunne (our newly appointed Superintendent of Wireless) and Mr. C. Carroll, the R.I., paid a visit to the North and found time to meet 7BQ and 7LZ. It is certainly gratifying to see the interest taken in Amateur Radio by these two officers.

As an item of interest for those stations who were QSOing the Friendly Islands, VR5IP advises that both he and VR5PL are one hundred per cent. QSL, however they are at present temporarily out of cards and are awaiting new supplies from the U.S.A.

VK3ACR, ex-7KR, is at present in Launceston. Charlie is still as keen as ever and is doing the rounds of the shacks. Owing to the contest I have very little station activity to report.

7DS worked his first 28 Mc. DX. It was certainly Hugh's big moment. —...— 7RK found some good DX and quite a few new countries, that was Ray's main reason for sticking to the contest as he did. —...— 7BQ also had a lucky break when he contacted XE1A on 7 Mc. phone for a one hundred per cent QSO.

7JW has not been seen by any of the Launceston gang since he resumed activities, however he is working quite a few VKs on 7 Mc. phone judging by the stations heard calling him. —...— 7LZ has also had rather a quiet month, but was fortunate enough to log a couple of decent contacts in the test. Even tried 3.5 Mc. with XE1A, but without success.

A.O.C.P. CLASS

The Victorian Division A.O.C.P. Class will commence on 15th January, 1948. Lectures are held on Monday and Thursday evenings 8-10 p.m. Persons desirous of being enrolled should communicate with the Secretary Box 2611W, G.P.O.. Melbourne; Phone FJ 6997 from 9 to 5, or the Class Manager on either of the above evenings.

AMATEUR CALL SIGNS

All Call Signs that have been published in "A.R." are supplementary to the July, 1947, P.M.G's. Call Book.

Aterations

VK2AFP—R. L. C. Gream, c/o C.B.C.C. Substation, Elangowan Rd., via Casino, N.S.W.
VK2AKN—G. C. Morrison, 48 Brabyn St., North Parramatta.
VK2AZ—H. L. Day, 105 Victoria Rd., Drummoyne, N.S.W.
VK2EH—E. P. Hodgkins, 28 Brookong Ave., South Wagga, N.S.W.
VK2IT—W. R. Beveridge, 74 Epping Ave., Epping, N.S.W.
VK2PV—J. P. Vesper, 30 Bradley's Head Rd., Mosman, N.S.W.
VK2SI—R. J. Scholtz, 49 Wallis Ave., Strathfield, N.S.W.
VK2YT—G. R. Woodward, 304 Stewart St., Bathurst, N.S.W.
VK2ZN—J. W. M. Cottrell, c/o **Radio Centre**, Carlingford.
VK3ADJ—D. J. Harkin, 77 High St., Prahran, Vic.
VK3AIG—I. G. Gillies, 51 Denham St., Hawthorn, E.2.
VK3AJH—J. R. Handley, 84 Neville St., Albert Park.
VK3AKL—K. S. Hunt, 69 Riviera St., Mentone.
VK3MK—N. D. McKenzie, Smith St., Warragul.
VK3QY—C. W. Richardson, Edward St., Cheltenham.
VK3RE—W. J. Hehir, Kent Rd., Hamilton.
VK3XH—C. A. Hyatt, 30 View St., Alphington.
VK3ZM—H. D. Nihill, 6 Gower St., Kensington, W.1.
VK4FJ—S. R. Baxter, 151 Jackson's Estate, Cribb Island, Brisbane, Qld.
VK4WB—W. E. Hagarty, 13 Sooning St., Hermit Park, Townsville.
VK5BU—F. F. Bourne, 52 Cambridge Terrace, Malvern, S.A.
VK5HT—H. J. Townsend, 25 Glosse Ave., North Glenelg, S.A.
VK5KJ—G. W. Connon, c/o Flying Doctor Base, Alice Springs, N.T.
VK5RS—R. S. Edgar, Morshead Ave., Springbank, S.A.
VK5XY—W. N. Hart, 19 Fisher St., Fullarton, S.A.
VK6BG—A. P. Piggford, 17 Boreham St., Cottesloe, W.A.
VK6RK—R. S. Choate, 228 Hensman Rd., Subiaco.
VK9AI—B. E. Matheson, c/o O.T.C. Radio Station, Port Moresby, New Guinea.
VK2SS now VK9SS—A. Skene-Smith, Port Moresby, New Guinea.

Cancellations

VK2XX—R. Dale, 12 Laycock St., Penshurst, N.S.W.
VK4RU—R. A. J. Taylor, Nelson St., Mackay, Q'land.
VK5WB—W. G. Brett, 59 Osmond Terrace, Norwood, S.A.
VK6DO—I. M. Hobbs, 38 Mitchell St., Merredin, W.A.

New Issues

VK2AEM—E. J. Mutch, 25 Elizabeth Bay Rd., Sydney.
VK2AGB—G. H. Bamford, 79 Cobsett St., Concord West, Sydney.
VK2AGC—G. Books, Bywong, Sutton, N.S.W.
VK2AIX—G. A. Wood, 31 Ruthven St., Bondi Junction, Sydney, N.S.W.
VK2AJN—J. B. Jarman, 38 City Rd., Chippendale, N.S.W.
VK2APR—Mrs. J. F. Taylor, 11 March St., Richmond, N.S.W.
VK2AUO—A. E. C. Cooper, c/o A. J. Cooper Pty. Ltd., 2 Quay St., Sydney (station portable on Yacht "Asgard").
VK2FF—L. C. Bracken, 71 Macpherson St., Mosman, N.S.W.
VK2MA—A. N. Lansley, 2 Jersey St., Enfield, N.S.W.
VK2MB—H. J. Banks, 229 Bronte Rd., Waverley.
VK2PC—S. N. Parkinson, 56 Sydenham Rd., Marrickville.
VK2QC—J. L. Carter, 182 Madeline St., Belmore.
VK2QV—K. L. Leask, 88 Trafalgar St., Belmore.
VK2RS—R. Q. Rawnsley, 1 Fremont St., Concord West.

VK2ZU—N. S. Gilmour, 12 The Grove, Mosman.
VK2ZZ—W. R. Clarke, 34 Redan St., Mosman.
VK3ACD—A. Campbell-Drury, Heard Island (Antarctic Expedition).
VK3AFI—H. R. Fitzsimmons, 26 Frederick St., Horsham (portable).
VK3AKG—K. G. Horne, 18 Lava St., Warrnambool, Vic.
VK3AMG—G. S. Compton, Heard Island (Antarctic Expedition).
VK3ANL—E. L. Blackmore, 26 Mayston St., Hawthorn.
VK3APA—K. C. Parker, Staff Quarters, Fiskville, via Ballan.
VK3AV—J. L. A. Martin, 11 Pynsent St., Horsham.
VK3ME—A. Stuart, 57 The Boulevard, Hawthorn.
VK3OY—L. E. Macey, Heard Island (Antarctic Expedition. Home Address: 17 Nathan St., Coogee, N.S.W.)
VK3PE—R. T. Pettigrew, 2 Donne St., West Coburg.
VK3QL—S. H. Le Breton, 22 Hargraves St., Mornington.
VK3QQ—J. R. Lancaster, 5 Darling St., Hughesdale.
VK3TG—F. H. Taylor, Turner Rd., Highett.
VK3UE—S. H. Adams, 7 Wellman St., Box Hill, E.12 (portable).
VK3US—Mrs. G. M. Churchward, "Shirley," Red Hill.
VK3ZF—G. G. Coventry, 7 Tanner Gve., Northcote, N.6.
VK4AE—A. L. Smith, Macdonell St., Toowong, Q'land.
VK4BL—A. H. Hinkler, Crosby Rd., Albion (portable in Kingaroy-Wooroolin areas).
VK4GA—G. A. Shearer, Hunter St., Rockhampton.
VK4ML—L. L. G. Meek, Flat 30/5, Qld. Temporary Housing, Rocklea, Brisbane.
VK5BP—W. M. Rice, Amanda St., Murray Bridge, S.A.
VK5KB—P. H. Syme, 17 Northgate St., Unley Park.
VK5KE—J. P. Rosevear, 103 David Terrace, Kilkenny.
VK5TT—Thebarton Boys' Technical School, Ashley St., Thebarton.
VK5WH—Woodville High School, Woodville, S.A.
VK6AY—A. V. Tresidder, 47 The Avenue, Nedlands, W.A.
VK6LA—L. C. Allen, 24 Commonwealth Ave., North Perth.
VK6LB—L. S. Blackman, 5 Farmer St., North Perth.
VK6MX—M. S. Lacy, 74 Highway, Nedlands.
VK6MZ—F. T. Marjure, Jindong, via Busselton, W.A.
VK6ND—N. H. Dawson, 397 Charles St., North Perth.
VK6QF—Q. J. Foster, 15 Waverley St., South Perth.
VK7AE—G. Major, Macquarie Island (Antarctic Expedition).
VK7CF—C. J. Frisby, Lake Margaret Power Station, via Queenstown, Tas.
VK7LS—L. S. Eddington, 18 King St., Sandy Bay, Hobart, Tas.
VK7MK—M. H. Koglin, 65 Davey St., Hobart.
VK9BP—B. P. O'Connor, Dept. Civil Aviation, Govt. Aerodrome, Lae, New Guinea.

All above calls are complete up to the 14th November, 1947.

DON'T "LEAVE THE DISHES IN THE SINK"

Every man who starts in the Amateur game sets his sails to an untried breeze. He is the first man to ever burst into the maelstrom.

After twenty-one years, the fight for the ideal winter-spring operating position (along-side the kitchen stove) has become intense; the fighters are treading on each other's toes; woe to him who stops to tie his shoe strings.

Never before were men devoured by so insatiable an ambition, or scouraged by so merciless an activity as Amateur Radio.

We need all the vigor, all the optimism, all the hope and all the grit we can muster up to strengthen us, to wash those DISHES.

When you are despondent and discouraged, play the game, no tyranny of circumstances can permanently imprison you in the pantry. Play the game with the cards you have, don't ask for a new deal; Listen Mum, DX—no stove!

Modification of Type 3, Mark II

(Continued from page 6)

attached to plug from which existing lead was removed). Second set of contacts short circuit relay winding.

Up position of key switch:—(PHONE) First set of contacts performs same function as first set in down position. Second set of contacts short circuits signalling key.

(2) Relay of telephone type with suitable winding and three sets of contacts. The winding is arranged in series with 500 v. h.t. lead to Type 3 Transmitter, and the relay therefore operates when anode current flows. The first set of contacts is specially insulated and normally closed, short circuiting the secondary of modulation transformer which is also connected in series with 500 v. lead to Type 3.

The second set of contacts, also specially insulated, is of change over type, and switch h.t. from the receiver to the modulator. The receiver being connected when relay is not operated.

The third set of contacts operate pilot lamp to show when relay is operated.

FOR SALE, EXCHANGE, WANTED

9d. per line, minimum 2/-

THREE Stage Transmitter comprising 837 dblr., 837 buf., and Eimac 35TG final stage. Capable of 100 watts input on 7, 14 and 28 Mc. Using Eddystone and Hammarlund tuning condensers with h.v. split-stator Hammarlund condenser in final. Built in enclosed metal cabinet 32" high, 15" wide and 10" deep. Includes 4" 0/250 Ma. meter. Including power and bias supplies, but not including oscillator stage. Price £24. Also 803 r.f. pentodes (new) £2 each; pair of 805 R.C.A. class B triodes £1 each; and 4242, 50 watt triodes, 15/- each. Write: D. C. McDonald, VK3DM, 16 Railway Avenue, Malvern, Victoria, or Phone MW 9654.

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